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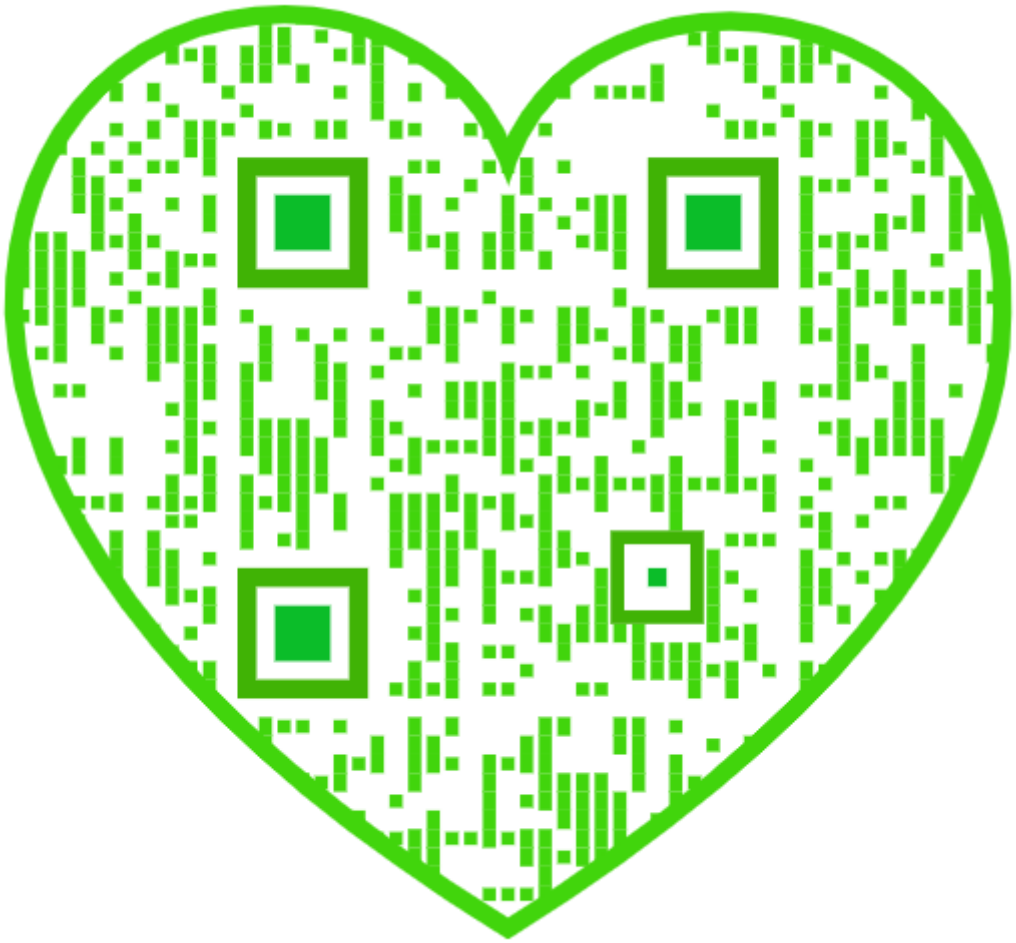

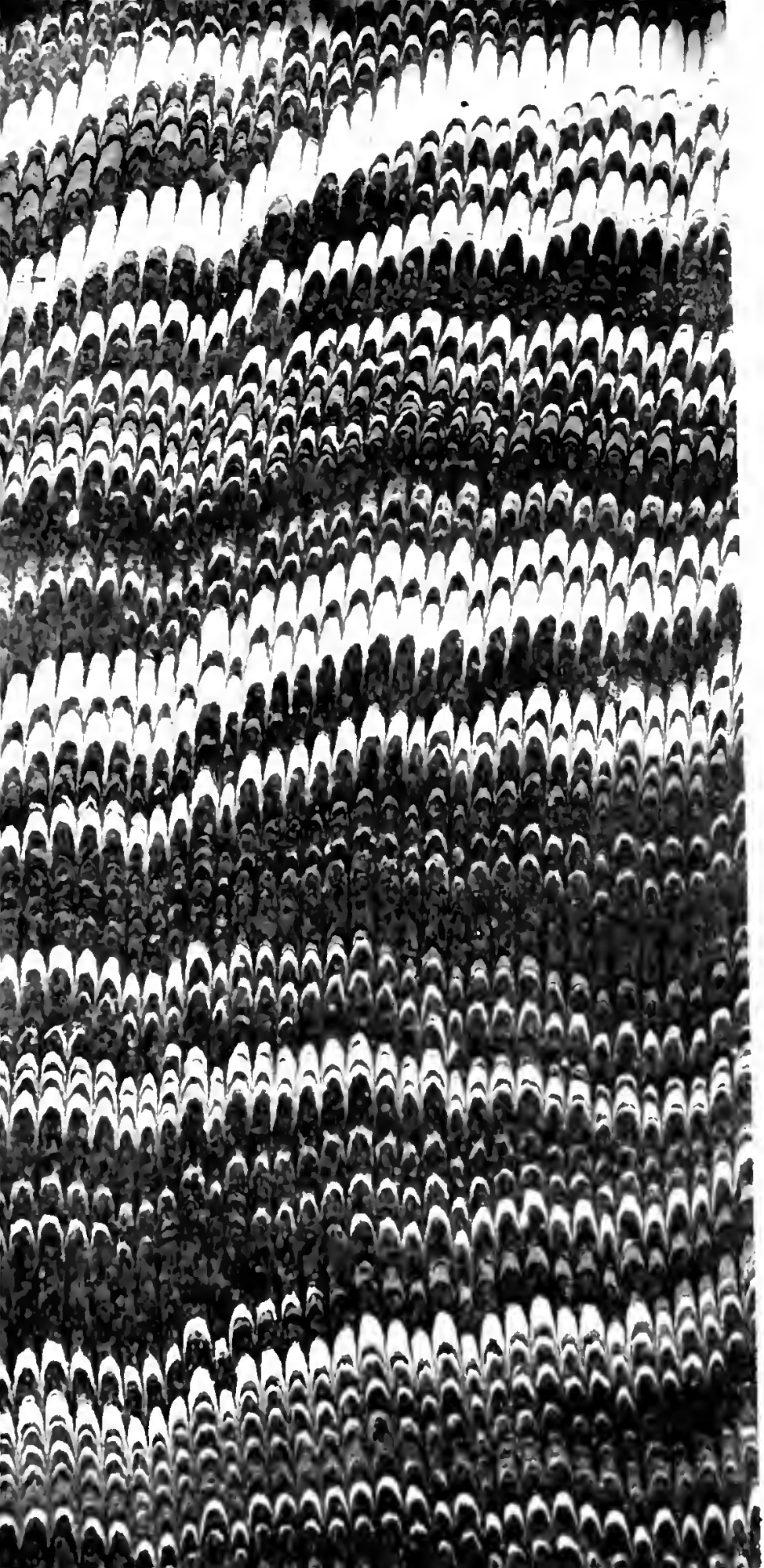

1818

J. N. HEARDER & SON'S

Guide to Sea Fishing

AND THE

RIVERS OF SOUTH DEVON,

AND

DESCRIPTIVE CATALOGUE

OF THEIR

Prize River and Sea

FISHING TACKLE,

CRICKET,

ARCHERY, CROQUET,

UMBRELLAS, PARASOLS, &c.

MANUFACTORY:

195, UNION STREET, 195,

PLYMOUTH.

Seventh Edition, considerably enlarged,

AND CONTAINING A MONTHLY TABLE OF

EDIBLE FISH "IN SEASON."

Entered at Stationers' Hall.

Stack
Annex
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953

INTRODUCTION.

The value of a short compendium which shall furnish the fisherman with concise and pertinent remarks on the various classes of fishing operations, and indicate the localities in which they can be advantageously carried on, and which shall at the same time furnish him, not only with a description of the tackle suitable for different purposes, but with a copious price list of such tackle, is so obvious that the present little work appears to need no other recommendation to the public. It has already passed through six editions, and the eagerness with which it has been sought for, and the satisfaction expressed by those who have become possessed of it, have induced the Authors to render it more complete, by extending the list, embodying recent improvements and numbering each article. The table of edible fish in season throughout the year has been duly appreciated as well by the housekeeper as the fisherman.

The list of nets, and the chapter on the use of the Otter Trawl, introduced for the first time in the last edition, has been found so acceptable that it has been carefully revised and extended in the present one. Through the kindness of W. C. P. Medlycott, Esq., F.L.S., an eminent naturalist, who resided many years at Malta, J. N. Hearder and Son have been able to furnish a copious list of the fish met with in the Mediterranean, and thus to arrange a fit-out of tackle

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suitable for Mediterranean and Gibraltar fishing. For the convenience of yachtsmen desirous of equipping themselves for fishing on our own coasts, they have also given a list of suitable tackle.

Necessity is the mother of invention, and HEARDER AND SON having had to fit out H.M.S. Challenger with nets and tackle suitable for the exploring expedition, have contrived a new form of Crab and Lobster Pot, made to pack one within the other, by which means a dozen will go in the space of three. They have lately had the satisfaction of hearing that one of the trawls which they supplied to H.M.S. Challenger for the use of the Exploring Expedition has been successful in bringing up new species of fish from the depth of three quarters of a mile. And they beg to tender their grateful acknowledgments to Professor Baird, Smithsonian Institution and United States Fish Commissioner, for the valuable copy of his report, and the information which he so kindly from time to time furnishes respecting the fisheries around the coast of the United States.

The alteration in the parcel post opens up facilities for the transmission of a great number of fishing appliances, since any article not exceeding 12 ozs. can now be forwarded by post at the following rates:—

POSTAL RATES FOR PARCELS.

Not exceeding	1 oz.			1d.
Exceeding	1 oz.	but not exceeding	2 ozs.	1½d.
,,	2 ozs.	,,	4 ozs.	2d.
,,	4 ozs.	,,	6 ozs.	2½d.
,,	6 ozs.	,,	8 ozs.	3d.
,,	8 ozs.	,,	10 ozs.	3½d.
,,	10 ozs.	,,	12 ozs.	4d.

Although this cheap postage is only limited to the weight of 12 ozs. yet heavier parcels can be sent; but these are charged at the rate of 1d. per oz. for their entire weight, thus a pound would cost 1/4, 2 lbs. 2/8,

and so on. By a recent arrangement this last rate of postage has been adopted between London and all places in India; that is to say, parcels are carried by post at the rate of 1s. 4d. per lb., or fraction of a lb., between London and any of the Indian possessions, and the postage may be prepaid or not.

By the addition of a number to each article, the purchaser is spared the trouble of particularizing it. He has only to quote the number, and the article will be sent by rail or post, as the case may be, in strict accordance with the number.

In committing this new edition to the public, HEARDER AND SON, most respectfully and sincerely thank them for their liberal patronage, and solicit a continuation of it, assuring them that it shall be always their earnest endeavour to merit their support.

January, 1875.

MEDALS AWARDED TO
J. N. HEARDER AND SON

FOR THEIR VARIOUS INVENTIONS AND IMPROVEMENTS IN

SEA FISHING LINES AND TACKLE

AND

ARTIFICIAL RIVER AND SEA BAITS.

ROYAL CORNWALL POLYTECHNIC INSTITUTION, 1865.

EXPOSITION INTERNATIONALE DE PECHE, BOULOGNE-SUR-MER, 1866.

Manufactory—195, UNION ST., PLYMOUTH.

ISAACUS NEWTONIUS

DEVONPORT & STONEHOUSE MECHANICS INSTITUTE FOUNDED 1825
POLYTECHNIC EXHIBITION

EXHIBITION OF THE WORKS OF INDUSTRY OF ALL NATIONS
EXHIBITOR
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H.R.H. PRINCE ALBERT PRESIDENT OF THE ROYAL COMMISSION

GREAT INTERNATIONAL EXHIBITION OF ALL FINE ARTS INDUSTRIES AND INVENTIONS LONDON ANNUA

EDWARD PRINCE OF WALES PRESIDENT ALBERT

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PRICE LIST.

N.B.—THIS LIST SUPERSEDES ALL PREVIOUS ONES.

LINES.

HEARDER & SON'S Lines are of the finest material, and are spun by a peculiar process which prevents them from curling or running into kinks when wet. They are evenly spun, beautifully pliable, bulk for bulk stronger than any other Lines of the same kind, and free from that wiry hardness which is about the most objectionable quality a line can possess.

UNMOUNTED LINES.

IN HANKS OR COILS.

Longer or shorter lengths than those specified at the same rate.

No.	
00	For Boulter heads, &c., per 50 fms., 10/-
0	Ditto, tanned, 11/-
1	Ditto, 6/6
2	Ditto, tanned, 7/6
3	Ditto, medium, 5/-
4	Ditto, tanned, 6/-
5	Lines for Spiller heads, 50 fms., 3/6
6	Ditto, tanned, 4/6
7	Smaller ditto for Trots, 2/6
8	Ditto, tanned, 3/6

COD AND CONGER LINES.

9	40 fms., stout, 5/6
10	Ditto, medium, 4/-
11	Ditto, fine, 3/-

The above tanned, 9d. each extra.

WHITING LINES.

12 40 fms., stout, 3/-
13 Ditto, medium, 2/6
14 Ditto, fine, 2/-

Tanned, 6d. to 9d. extra.

Yacht Lines for Mackerel Railing.

15 20 fms., stout, 1/3
16 Ditto, medium, 1/-
17 Ditto, fine, 1/-

Tanned, 6d. extra.

Longer or shorter lengths in proportion.

POUTING LINES.

18 20 fms., stout, 1 -
19 Ditto, medium, 1/-
20 Ditto, fine, for harbour fishing, 9d.

Tanned, 6d. extra.

The above are also suited for Drift Lines.

Pollack & Mackerel Boat Whiffing Lines.

21 15 fms., medium, 9d.
22 Ditto, fine, 8d.

Tanned, 3d. extra.

FINE LINES, SNOODING, &c.

23 Flax Snooding, per hank, 12 fms., 6d.
24 Ditto, tanned, 9d.
25 Superfine flax Trolling Lines, admirable for Pollack or Bass Fishing with a rod, also excellent for fine Mackerel snoods, 20 to 120 yards, 8d. per score yards. Do., tanned, 10d. per score yards
26 Ditto, waterproofed, 1/- per score yards.
27 Water Cord, or fine Snooding, in hanks from 10 to 30 yards, at 2d. per score yards
28 Ditto, medium, 3d. per score yards
29 Ditto, stout, 4d. ditto
30 Superfine Netting Twine, 2/6 to 3/6 per lb.

31 Hair Lines for sea fishing, any length without knots, suitable for drift or whiffing line, 1½d. per yard
32 Medium ditto, 2d.
33 Stout ditto, 2½d.
34 Extra stout, 3d.
35 Fine Hair Trolling Lines, in lengths of 10 to 40 yards, 1d. per yard
36 Spun Silk Lines, 1½d. to 2d. per yard
37 Chinese Twist, 1½d. to 3d. per yard
38 Superior Gimp (white or black), with pure silk interior, fine and extra fine, 1½d. per yard
39 Ditto, medium, 2d. and 3d.
40 Ditto, stout, 4d. and 6d.
41 Ditto, extra strong, with flax interior, to hold one cwt. or more, suitable for Conger and Cod snoods, 6d. to 10d. per yard
42 Eight-plat Flax Lines, stout or fine, 1/8 per score yards
42*a* Extra strong, 2/6 per score
43 Ditto, tanned or waterproofed, 2/- per score
44 Eight-plat Silk Lines, any length, fine or medium, 2d. per yard
45 Ditto, waterproofed, 2d. per yard
46 Ditto, stouter, plain or waterproofed, 2¼d. per yard
47 Ditto, extra stout, 2½d
48 Twisted Gut Lines, 6d. per yard
49 Ditto, strong, 9d. per yard
50 Ditto, extra strong, 1/- per yard
51 Ditto, superior Marana Gut, 1/6 to 2/-
52 Ditto, four-fold Gut, 1/-
53 Ditto, ditto, stouter, 2/-
54 Ditto, ditto, Marana, 3/-
54*a* Pennell's Graduated Twisted Gut Trace, with anti-concussion knots, 3 yards, 3/- each
55 Platted Gut Lines, without knots, 1/- per yard
56 Superior Single Salmon Gut Lines, 6d. per yard
57 Ditto, stouter, 9d.
58 Ditto, extra Marana Gut, 1/-

For finer Gut Lines, see River Tackle.

59 Silkworm Gut, medium quality, 2/6 to 4/- per hank
60 Ditto, stouter, 5/- to 8/-

61 Ditto, superior Salmon Gut, 10/- to 16/-
62 Ditto, extra strong Marana Gut, 20/-, 25/-, and 30/- per hank of 100 lengths, or 2/6, 3/, and 3/6 per dozen lengths, selected
63 Soft Copper Wire for snoods, 4d. per dozen yards
64 Ditto, for serving lines, 4d. to 1/- per ounce
65 Plated Wire, 2/- per ounce

PRIZE MOUNTED SEA TACKLE.

SURFACE TACKLE.

66 Smelt Line and paternoster, with four hooks, on cane winder, 6d.
67 Ditto, stronger gut and line, 9d. and 1/-
68 Mullet Line and paternoster, with four hooks, on cane winder, 1/-
69 Ditto, twisted gut, 1/6
70 Ditto, six hooks, 2/-
71 Ditto, with ten yards hair line, 2/6

Rod Lines for Spinning for Bass, Pollack, Lythe, Bream, Billet, Codlings, and Mackerel from a Boat or Jetty, or from the Rocks. (See article, "Bass Fishing.")

The Gut appendages are here quoted first, as they can be used with any of the lines which follow: the purchaser has only to refer to the number of the appendage, and state the length and character of the line required.

72 Two yards platted Gut Trace, with swivel, supplemented by one yard strong single Salmon gut, and terminated by a No. 3 Plano-convex Minnow, 4/6
73 Ditto, twisted gut in lieu of platted gut, 3/6
74 Ditto extra strong twisted gut, 4/-
75 Ditto, 3 yards strong single Salmon Gut, with swivel, 4/-
76 Ditto, extra Marana Salmon Gut, 4/6 and 6/-

The above lines terminated with HEARDER's Spinner, Despatch bait, or Sand-eel, 1/- less

Lines suitable for the above Appendages.

77 Superfine Flax Line, 30 to 100 yards, 8d. per score
78 Ditto, tanned, 10d.
78*a* Ditto, waterproofed, 1/-
79 Eight-plat Flax Lines, 1/8 per score
80 Ditto, tanned or waterproofed, 2/-
81 Eight-plat Silk Line, waterproofed, 2d. per yard
82 Stronger ditto, 2¼d.
83 Extra stout, 2½d.

The following are useful Bass Lines complete.

84 Sixty yards strong waterproofed eight-plat Silk Line, with No. 72 platted gut appendage, 16/-
85 Sixty yards platted Flax Line, waterproofed, with twisted gut appendage No. 73, 10/-
86 Sixty yards superfine Flax Line, tanned or waterproofed, with No. 73 appendage, 6/-

FLOAT LINES.

86*a* Hair Lines on cane winders with quill float, 1d. to 3d.
86*b* Ditto, with cork float, 4d.
86*c* Ditto, 6d.
87 Flax Lines, with floats on square winders, for Pollack, 9d. each
88 Ditto, stouter, with larger float, 1/6
89 Ditto, with larger floats and gimp snood, 2/- and 2/6
90 Superior Float Line of stout horsehair, large float, &c., on mahogany winder, for jetty or boat fishing, 3/-
91 Ditto, longer, stronger, and larger float, 4/-
92 Ditto, with paternoster, 5/- to 7/-

Whiffing, Mackerel, Railing Lines and Tackle.

See articles on the subject in Treatise.

93 20-yard Line for Pollack, Lythe, Mackerel, &c., with boat-shaped sinker, wire snood, and single gut hook on square winder, 1/-

94 Ditto, longer and stronger, with gimp snood, 1/6
95 Ditto, with spinner at the end, 1/9
96 30-yard Pollack or Mackerel Flax Line, with boat-shaped sinker, gimp snood, gut trace, 3 flies and spinner, 2/6
97 Ditto, with 4 flies, swivel, and spinner, 3/
98 Ditto, tanned, on mahogany reel, with boat-shaped or improved sensitive sinker, 3 flies to twisted gut, swivel and spinner, 3/6
98*a* Ditto, horsehair without knots, 7/-
99 Ditto, ditto, 4 flies, &c., 4/-
99*a* Ditto, ditto, horsehair without knots, 7/6
100 Ditto, 6 flies, &c., 5/-
100*a* Ditto, ditto, horsehair without knots, 8/6
100*b* Stout Flax Line, with extra strong gut appendages for Irish Coast fishing, 7/-

Yacht, Mackerel, and Pollock Railing Lines.

101 20 fms., tanned, on ventilating winder, with boat-shaped lead, gimp snood, and flight of flies, swivel and spinner, 6/-
102 Ditto, with stouter gut trace, 7/-
103 Ditto, with improved double taper sensitive lead on loose axis, 1/- extra.
(See Article on Sinkers.)
104 Ditto, with plummet lead and HEARDER's improved short revolving boom or chopstick on brass anti-friction tube, 1/6 extra
105 40-yard Yacht Railing Line of strong horsehair, without knots, anti-friction revolving boom or one-arm chopstick, with swivel, gimp snood, flight of flies, and spinner, mounted on ventilating reel, a very superior article, 15/- to 18/-
Revolving booms or chopsticks separate, 1/-

WHIFFING APPENDAGES for LINES.

106 Twisted or strong single Salmon Gut Trace, with three flies, brass swivel and spinner, 1/6 (*See remarks on Whiffing.*)

107 Ditto, four flies, 2/-
108 Ditto, six flies, 2/6
109 Ditto, extra strong, twisted Gut trace, with four twisted Gut flies, 2/6
110 Ditto, six twisted Gut flies, 4 -

Stouter Gut Lines made to order.

DRIFT LINES.

111 40 yards strong patent Horsehair Line on ventilating reel, with pipe leads, gimp snood, brass swivel, strong gut trace, and hook for bait, 8/6
112 Ditto, ditto, stronger, 10 -
113 Ditto, ditto, extra strong, 11/6
114 40-yard tanned Flax Drift Line, on ventilating reel, with pipe leads, &c., 4/-
115 Ditto, stouter and heavier leads, 5/-

CHAD LINES.

116 25-yard Chad Line, with twisted gut, paternoster, and four hooks, on square winder, 2/6
117 Ditto, tanned, on mahogany ventilating reel, 3/6
118 25-yard Chad Line with chopstick, 2 -
119 Ditto, tanned, on mahogany ventilating reel, 2/6
120 Anti-friction brass revolving Chopstick, 1/- extra

These Lines are also suitable for Pouting.

BOTTOM FISHING.

FLAT-FISH AND POUTING TACKLE.

Hearder & Son's Gut Leger Trot for Flat-Fish, consisting of a gut line or trace, with a sinker at each end, and hooks at intervals, one of the sinkers to be attached to the end of the main line. (*See article on Flat-fish.*)
121 3-feet Trot, on single gut, 1/-

122 Ditto, twisted gut, 1/6
123 Ditto, with 25 yards tanned line, on mahogany reel, 2/6
124 Trot of 6-feet, twisted gut, with 6 hooks and 25-yard line, on mahogany reel, 4/-
125 3-yard Trot, with 9 hooks, tanned line, and mahogany reel, 5/-
126 Ditto, ditto, stronger gut and stronger line, 7/-
126*a* 30-fm. ground leger Throw Line, on ventilating reel for fishing for bass, conger, &c., from the shore, with 1 lb. plummet lead and revolving boom, 6/-

POUTING LINES.

127 40-yard Pouting Line with chopstick, square winder, 2/-
128 Ditto, stouter, 2/6
129 40-yard Pouting Line, tanned, on mahogany ventilating winder, with chopstick, 2/6
130 Ditto, stouter, 3/-
131 Ditto, 50 yards, stout, 3/- and 3/6
132 HEARDER's brass revolving detachable Chopstick, 1/6 to 2/- extra

(*See Ground Fishing.*)

N.B.—These lines are all suitable for Chad fishing.

WHITING LINES.

133 30 fms. Prize Tanned Line, warranted not to kink, on ventilating reel, improved 2 lb. boat-shaped shearing sinker, sid-strap, and double-ended gimp snood, with hooks to gimp or twisted gut, 6/-
134 Ditto, stouter, with 3 lb. improved shearing sinker, 7/-
135 Ditto. with swivels, 8/- to 9/-
136 40 fms. Tanned Line, warranted not to kink, on ventilating reel, improved 2 lb. boat-shaped shearing sinker, sid-strap, and double-ended gimp snood, with hooks to gimp or twisted gut, 6/6
137 Ditto, stouter, with improved boat-shaped shearing sinker, 8/-

(*See Whiting Fishing.*)

138 Ditto, with swivels, 9/- to 10/6
139 30 fms. Tanned Line, on ventilating reel, with detachable chopstick, and 2 lb. plummet lead and swivels, 6/-

140 Stouter ditto, with 3 lb. lead, 7/-
141 40 fms. medium Tanned Line, on ventilating reel, with detachable chopstick, 2 lb. plummet lead, gimp hooks, with swivels, 7/-
142 Ditto, stouter, with heavier lead and larger swivels, 8/-
143 30 fms. Tanned Line, complete, with HEARDER'S improved Kentish rig, or brass revolving chopstick, on anti-friction tube, and plummet lead, 6/6
144 40 fms. Tanned Line, with improved Kentish rig, or revolving chopstick, 2 lb. plummet lead, gimp hooks, with swivels, 7/6
145 Ditto, stouter, with heavier lead, 8/6 to 10/6
146 Detachable revolving Chopstick, separate, 1/6 to 2/6
147 Lines fitted with Dartmouth rig, 6/- to 8/-

ALL RIGS TO ORDER.

COD AND CONGER LINES.

148 30 fms. Cod Line, tanned, on ventilating reel, with boat shaped improved shearing sinker, sid-strap, double-ended gimp snood, and hooks to twisted wire or soft platted flax snoods, 7/-
149 40 fms. ditto, 8/-
150 40 fms. ditto, with three strong brass swivels and hooks to twisted wire or soft platted flax snood, 9/-
151 Ditto, ditto, stouter, 10/-
152 Ditto, ditto, with stronger swivels and gimp snoods, with hooks to extra strong gimp, or line served with wire, 12/-, 14/-, 16/-
152*a* 50 fms. ditto, 20/-

GEAR FOR DEEP SEA LINES.

153 HEARDER'S detachable Wire Chopstick, to be used with sinker of any weight, 1/- to 1/6
154 HEARDER'S Brass revolving Chopstick, on anti-friction tube, an improved form of the Kentish rig, 1/6 each

(*See Remarks on Whiting Fishing.*)

155 Stouter ditto, 2/-
156 HEARDER's short revolving Boom, 1/-
(*See Whiffing.*)

157 Gimp Whiting Snood, to take two hooks below the lead, 7d. to 1/- each
(*See Whiting Fishing.*)

158 3-feet Gimp Sid-strap, 4d. to 8d. each
159 Double-ended strong Gimp Snood for Conger Lines, loops whipped with wire, 1/- to 2/6
160 3-feet extra strong Gimp Sid-straps, loops whipped with wire, 1/- to 2/-
161 Eyed Hooks attached to twisted Wire Snoods, for small Conger and Codling, 2/- and 2/6 per dozen
162 Ditto, larger, with stronger Wire Snoods, 3/-
163 Strong-eyed Sea Hooks attached to extra strong Gimp, for Conger, Hake, &c., 6/- per dozen

SWIVELS FOR SEA LINES.

164 Brass Box Swivels, No. 1 to 10, 1/6 per dozen
165 Ditto, with spring hooks, for attaching Minnows, &c., 2/- per dozen
166 Strong Brass Swivels for Whiting and Ground Lines, 2d., 3d., 4d., and 6d. each
167 Ditto, very strong, from 2 to 5 inches in length, for Cod and Conger, 8d., 1/-, 1/6-, 2/-, 2/6, 3/-
(*For Steel Swivels, see River Tackle.*)

Fishing Leads or Sinkers.

168 Pipe Leads, 1 oz. and under, 1/- per dozen
169 Ditto, 1½ and 2 ozs., 1/6 per dozen
170 Sensitive Leads, double-taper, with loose wire through the axis, 2 ozs. and under, 2d.; 3 and 4 ozs., 3d. 6 ozs., 4d.
171 Ditto, 8 ozs., with central brass tube, 6d.; larger Sensitive Sinkers, 6d. per lb
(*See article on Leads.*)

172 Plummet Leads, Sugar Loaf, with Wire Eyes, 1d. to 6d. each

174 Boat-shaped Leads, with strong Wire Eyes for towing, 6d. per lb.
173 Plummet Leads, Pear-shape, for Railing, &c., 6d. per lb.
175 Smaller ditto, 2d. to 6d. each
176 Improved Shearing Leads, with long wire arms, for keeping deep sea lines clear of each other at the bottom, 6d. per lb.
177 Plain Chopstick, with brass wire spreader through the lead for Pouting, 1/-
178 Ditto, for Whiting, 2/- to 3/-
179 Split Shot, 1½d. per box
180 Ditto, in larger Tin Boxes, 1/4 per lb.

Reels.

181 Square Wood Ventilating Winders, 3d. and 4d. each
182 Mahogany Ventilating Reels for Whiffing Lines, 6d. to 8d. each
183 Strong Wood Ventilating Reels for Whiting, Cod, Conger, &c., 1d. per inch
184 HEARDER's Box Reels for Boulters, carrying the line on the outside and the hooks in the interior, 9 inches square, 14 inches high, with cheeks, 12/-, 10 inches square, 15 inches high, 14/-, 11 inches square, 16 inches high, 15/-, 12 inches square, 17 inches high, 16/-, 15 inches square, 22½ inches high, 20/-

TROTS, SPILLERS, AND BOULTERS.

N.B.—The above terms are frequently used for one another; but for the sake of distinction, in the following list the term TROT is confined to floating lines, with a number of hooks suspended at intervals. The term SPILLER applies only to long lines and hooks of medium size, suited to stretch across estuaries; and the term BOULTER embraces the longer and stronger lines used at sea or on the coast for larger fish.

Floating Trots.

185 Floating Trot of tanned flax line, 25 hooks to twisted gut or gimp, with corks and pipe leads, 12/-

186 Ditto, with buoy-lines and sinkers, on separate reels, 20/-
187 Ditto, with brass swivel at every hook, 24/-
188 Floating Trot of tanned flax line, 50 hooks to twisted gut or gimp, 24/-
189 Ditto, with buoy lines, &c., 34/-
190 Ditto, with brass swivel at every hook, 40/-
191 Floating Trot Horsehair, 25 hooks to twisted gut or gimp, with buoy lines complete, 28/-
192 Ditto, with swivel at every hook, 32/-
193 Ditto, 50 hooks to twisted gut or gimp, 45/-
194 Ditto, with swivel at each hook, 52/6

Ground Spillers for Estuaries, &c., with 50 Hooks.

These can either be laid from the shore with a sinker at the further end, or laid in the middle of a channel with a buoy line at each end.

195 Spiller with 50 hooks to flax snood, wound on square wood reel, 5/-; or with buoy lines, corks, and sinkers, 13/-
196 Ditto, longer and better quality, 8/-; with buoy lines, &c., 18/-
197 Ditto, with 50 hooks to twisted gut or gimp, 15/-; or with buoy lines, 25/-
198 Ditto, ditto, with swivel at every hook, 6/6 extra
199 Ditto, longer and stronger, 20/-; or with buoy lines, 30/-
200 Ditto, with swivel at every hook, 8/6 to 12/6 extra
201 Spiller, with 50 Eel hooks to brass wire, 10/-; or with buoy lines, 20/-
202 Ditto, longer and stronger, 14/-, with buoy lines, 24/-
203 Ditto, with swivel at each hook, 8/6 to 12/6 extra
204 Spiller, with 50 hooks to detachable twisted wire snoods for small Conger, Flat-fish, Bass, &c., with buoy lines complete, 30/-
205 Ditto, with s rong swivel at each hook, 12/6 extra
206 Ditto, stronger and larger hooks, 35/-
207 Ditto, with swivel at each hook, 12/6 or 17/- extra

208 Extra strong Spiller, with 50 hooks to very stout Conger gimp, complete with buoy lines, 42/-
209 Ditto, with swivel at each hook, 12/6 to 17/- extra
210 Ditto, longer line and stronger hooks, 50/-
211 Ditto, with swivel at each hook, 12/6 to 17/- extra

Boulters, with 100 Hooks.

Wound on HEARDER's Box Reel, which carries the hooks inside, with buoy lines complete on separate reels—a novel and most complete arrangement. Any of the following Boulters can be had fitted with HEARDER's new Revolving Boulter-head Link, which permits the snoods to be attached to, or detached from it in a few seconds, at the same time that it prevents them from getting coiled up around it. This is a most useful contrivance, as in case of trouble in unhooking the fish, the snood can be instantly slipped off from the link and another substituted. Price 33/- to 50/- extra

212 Boulter complete, with 100 hooks to flax snood, 32/-
212*a* Ditto, stouter make, 36/-
213 Ditto, with Eel hooks to brass wire snoods, better quality, 52/-
214 Ditto, with hooks to gimp or twisted gut, 60/-
215 Ditto, with swivel at each hook, 17/- extra
216 Ditto, stouter make, with sea hooks to strong twisted wire detachable snoods, 75/-
216*a* Ditto, with strong swivels, 25/- extra
216*b* Ditto, extra stout, 84/-
217 Ditto, with strong swivels, 50/- extra
218 A very superior Boulter, with 100 large sea hooks to extra gimp, wound on box reel, with buoy lines complete, suitable for Conger, Cod, and large sea fish, 110/-
219 Ditto, with very strong brass swivel at each hook, 160/-
219*a* Ditto, extra strong, of very superior make, fitted with HEARDER's improved revolving head links, extra strong swivels and hooks, with wire snoods suitable for very heavy fish, £10 10s.
219*b* Ditto, with 200 hooks, £19

N.B.—Any number of the preceding Boulters can be joined end to end, so as to extend to any required length.

HOOKS.

220 Best Kirby Hooks, blue and tinned, 6·0, 2/- ; 5·0, 1/8 ; 4·0, 1/4 ; 3·0, 1/4 ; 2·0, 1/4 ; 1·0, 1/4 ; 1 to 14, 1/- per 100

221 Superior Limerick Hooks, black and tinned, 10·0, 8/- ; 9·0, 7/- ; 8·0, 6/- ; 7·0, 5/- ; 6·0, 4/- ; 5·0, 3/6 ; 4·0, 3/- ; 3·0, 2/6 ; 2·0, 2/- ; 1·0, 2/- ; 1 to 14, 1/- per 100

222 Extra Long Shank, ditto, 5·0, 3/6 ; 4·0, 3/- ; 3·0, 2/6 ; 2·0, 2/- per 100

223 Portsmouth Whiting Hooks, 2/- per 100

224 Exeter Round-bend Sea Hooks, blue, 1, 6/6 ; 2, 5/6 ; 3, 4/6 ; 4, 3/3 ; 5, 2/3 ; 6, 1/8 ; 7, 1/3 ; 8 to 14, 1/- per 100. Kirby Hooks, same price

225 Ditto, tinned, 1, 7/6 ; 2, 6/- ; 3, 5/3 ; 4, 3/8 ; 5, 2/4 ; 6, 1/10 ; 7, 1/4 ; 8 to 14, 1/- per 100. Kirby Hooks, same price

226 Ditto, tinned and eyed, 1, 10/- ; 2, 7/6 ; 3, 6/- ; 4, 4/- ; 5, 3/- ; 6, 2/6 ; 7, 2/- ; 8, 1/6 ; 9 to 14, 1/- per 100

227 Extra Long Hake and Cod Hooks, tinned and eyed, 2d. to 5d. each

228 Hake, Albacore, and Bonita Hooks, 2d. to 4d. each

229 Shark Hooks, with chains and swivels, 2/-, 2/6, and 3/- each

230 Double Hooks, 1/- to 3/- per dozen

231 Treble Hooks, blue, bright, or tinned 1/6 to 4/- per dozen

232 Ditto, ditto, extra large, 5/- to 12/- per dozen

232*a* Pot hooks, lip hooks, &c., &c.

Mounted Hooks.

233 Gut Hooks, 6d. to 1/- per dozen

234 Strong ditto, to Salmon Gut, 2/- to 3/-

235 Extra strong Marana Gut, 4/-

236 Twisted Gut Hooks, 2/-

237 Ditto, stronger, 3/-

238 Ditto, extra strong, 4/- to 6/-

239 Hooks to Gimp, 2/-, 2/6, 3/-

240 Large-eyed Sea Hooks for Conger, &c., to extra strong Gimp detachable Snoods, 6/- per dozen

241 Sea Hooks eyed with strong twisted Wire Snoods, 2/- and 2/6 per dozen
242 Ditto, larger stronger snood, 3/-
243 Ditto, with soft platted Flax Snoods, 3/-
244 Eel Hooks to Brass Wire, 1/- per dozen
245 Single Trimmers, 1/- to 1/6
246 Double Trimmers, 2/- per dozen
247 Spring Snap Hooks to Wire, 1/- each
248 Extra Large Treble Hooks to very strong Twisted Wire and Large Brass Swivel, for Porpoises, &c., 3/- to 4/- each

FLOATS.

249 Wood, painted, 1d. to 3d. each
250 Cork, 2d. to 6d.
251 Large Egg Floats, 8d. to 1/6
252 Extra Large, 2/-
253 Quill Floats, 2d. to 4d.
254 Porcupine ditto, 6d.

RODS.

255 Hazel Rods for Smelt and Mullet, 2 joints, 6d. to 9d.
256 3-joint ditto, 10d.
257 Ditto, bone tops, 1/-
258 Ditto, brass ferrules, 1/6, 2/-
259 4-joint, brass ferrules, 2/6
260 Ditto, ditto, 3/-
261 5-joint ditto, 4/-
262 Ash Rods for worm fishing, 2 joints, ringed, 1/3
263 Ditto, 3 joints, 9 feet, plain, 1/6
264 Ditto, better, 2/-
265 Ditto, ringed, 3/6
266 Ditto, 4 joints, 12 feet, plain, 3/6

267 Ditto, ringed, 5/-
268 Ditto, winch-fitted, 6/6
269 Ditto, ditto, brazed, 8/-
270 Bamboo Worm Rods, 3 joints, 2/6
271 Ditto, with lancewood top, 3/-
272 Ditto, ringed, brazed, and spliced top, 6/-
273 Ditto, plain, 4 joints, 4/6
274 Ditto, ringed, brazed, and spliced top, 8/-
275 Ditto, 5 joints, ringed, brazed, and spliced top, 10/-
276 Ditto, 6 joints, ringed, brazed, and spliced top, 12/-

Boat Rods with Upright Rings.

277*a* 2-joint, brazed, 8 feet, 6/-
278*a* Ditto, winch-fitted, 8/-
279*a* 3-joint, winch-fitted, 9 feet, 10/-
280*a* 4-joint, ditto, 10½ feet, 14/-
281*a* 4-joint, ditto, best, in bag, 10½ feet, 18/-
282*a* 3-joint, East India Cane, brazed, winch-fitted, in bag, 11 feet, 14/-
283*a* Ditto, 4 joints, 11 feet, 18/-

Large Strong Rods, for Sea Fishing from the Shore, with Upright Rings.

284*b* 4-joint, brazed, winch-fitted, in bag, 14 feet, 16/-
284*c* Ditto, 15 feet, 22/-
285*b* Ditto, 16 feet, 25/-
286*b* Ditto, 18 feet, 32/-

These Rods are adapted for fishing with Float Lines from a boat, a pier, or from the rocks.

Trolling Rods with Upright Rings.

287 4 joints, two tops, wire rings, 12 feet, 18/-
287*a* Ditto, cast rings, 23/-
288 Ditto, 14 feet, wire rings, 20/-
289 Ditto, 14 feet, 3 tops, cast rings, 25/-
290 Ditto, 14 feet, 3 tops, superior, 35/-

East India Cane Spinning Rods for Pike, Bass, Pollack, Billet, Lythe, Mackerel, &c.

291 4 joints, 12 feet, one top, wire upright rings, 20/-
291*a* Ditto, two tops, solid rings, 26/-
292 Ditto, 14 feet, 2 tops, wire upright rings, 25/-
293 Ditto, 16 feet, 2 tops, wire rings, 30/-
294 Ditto, 14 feet, solid rings, 2 tops, 28/-
295 Ditto, ditto, double brazed, solid rings, 35/-
297 Ditto, 16 feet, 2 tops, solid rings, 40/-
297*a* Ditto, ditto, double brazed, 45/-
297*b* Ditto, 18 feet, ditto, 50/-
298 Ditto, 18 feet, with spare short butt, solid upright rings, 4 tops, 60/-
299 Ditto, ditto, double brazed, 70/-
300 5 joints, 20 feet, 2 tops, wire upright rings, 50/-
300*a* Ditto, ditto, double brazed, solid rings, 55/-
301 4 joints, 18 feet, superior finish, German silver ferrules, inner caps, and winch fittings, extra short butt, with German silver mounts, brass upright rings, 84/-
302 Ditto, ditto, German silver, upright rings and mountings, extra finish, 100/-

For General Rods, see pages 41-42.

WINCHES OR REELS.

N.B.—Reels holding 40 yards and over are suitable for Salmon, Bass, Pike, &c.

Plain Winches.

303 10 yards, 1/6
304 15 yards, 2/-
305 20 yards, 2/6
306 30 yards, 3/-

Best Plain Burnished.

307 15 yards, 1½ inch diameter, 2/6
308 20 ditto, 1⅝ „ „ 3/-
309 30 ditto, 1¾ „ „ 3/6

310	40 yards, 2	inch	diameter,	4 -
311	50 ditto, $2\frac{1}{4}$	,,	,,	5/-
312	60 ditto, $2\frac{1}{2}$	,,	,,	6/-
313	70 ditto, $2\frac{3}{4}$	,,	,,	7/-
314	80 ditto, $2\frac{3}{4}$	,,	,,	8/-
315	90 ditto, 3	,,	,,	9/-

Check Reels.

316	20 yards,	4/-
317	30 ditto,	4/6
318	40 ditto,	5/-
319	50 ditto,	6/-

Burnished, Contracted, Plain.

320	15 yards	$1\frac{1}{2}$ inch	diameter	. . . .	3/-
320*a*	ditto	ditto		with check . .	4/6
321	20 ditto	$1\frac{3}{4}$	ditto	. . . .	3/6
321*a*	ditto	ditto		with check . .	5/-
322	30 ditto	$1\frac{7}{8}$	ditto	. . . .	4/-
322*a*	ditto	ditto		with check . .	5/6
323	40 ditto	2	ditto	. . . .	4/6
323*a*	ditto	ditto		with check . .	6/-
324	50 ditto	$2\frac{1}{4}$	ditto	. . . .	5/-
324*a*	ditto	ditto		with check . .	6/6
325	60 ditto	$2\frac{1}{2}$	ditto	. . . .	6/-
325*a*	ditto	ditto		bronzed and check .	9/-
326	70 ditto	$2\frac{3}{4}$	ditto	. . . .	7/-
326*a*	ditto	ditto		bronzed and check .	10/-
327	80 ditto	$2\frac{3}{4}$	ditto	. . . .	8/-
327*a*	ditto	ditto		bronzed and check .	11/-
328	90 ditto	3	ditto	. . . .	9/-
328*a*	ditto	ditto		bronzed and check .	12/-
329	100 ditto	$3\frac{1}{4}$	ditto	. . . .	10/-
329*a*	ditto	ditto		bronzed and check .	13/6
330	120 ditto	$3\frac{1}{2}$	ditto	. . . .	11/-
330*a*	ditto	ditto		bronzed and check .	14/6
331	130 ditto	4	ditto	. . . .	12/-
331*a*	ditto	ditto		bronzed and check .	15/6
332	150 ditto	$4\frac{1}{2}$	ditto	. . . .	15/-

332*a*	150 yards, 4½ inch diameter, bronzed and check	.	18/6
333	180 ditto 5 ditto	.	18/-
333*a*	ditto ditto bronzed and check	.	22/-

Improved Bronzed Contracted Reels,

With Revolving Plate Handle and Check, suitable for Salmon, Bass, Pike, &c.

333*b*	2 inches diameter	.	11/-
333*c*	2¼ ditto	.	12/-
333*d*	2½ ditto	.	13/-
333*e*	2¾ ditto	.	14/-
334	3 ditto	.	15/-
334*a*	3¼ ditto	.	17/.
335	3½ ditto	.	18/-
336	4 ditto	.	20/-
337	4¼ ditto	.	22/-
338	4½ ditto	.	24/-
339	4¾ ditto	.	29/-
340	5 ditto	.	28/- and 30/-
340*a*	5½ ditto	.	40/-

The quantity of Line each Reel will hold will vary with the thickness.

The above in Ebonite, with bronzed Rotating Plate Handle, 2/- to 3/- extra.

Burnished Multiplying Reels.

341	20 yards	.	6/-
342	30 ditto	.	7/-
343	40 ditto	.	8/-
344	50 ditto	.	9/-

Multiplying Reels, Contracted, Burnished.

345	20 yards	.	7/-
346	30 ditto	.	8/-
347	40 ditto	.	9/-
348	50 ditto	.	11/-
349	60 ditto	.	12 -
350	70 ditto	.	13/-
351	80 ditto	.	14/-

With Check, 1/- to 2/- extra

Hearder's Galvanized-Iron Gunwale Winch.

A novel and convenient invention for winding in Whiting and other deep sea Lines. It is fixed on the gunwale of a boat by means of an adjusting clamp and a tightening screw, to suit gunwales of different thicknesses. The line is wound upon a reel turned by a winch.

352 Boat Winch for Whiting Line, 15/-, or for Cod, 20/-
352*a* Gunwale Winch for Whiting, with shifting jaw to suit Yachts, 18/-, or for Cod, 22/-

ARTIFICIAL SEA BAITS, FLIES, &c.

Hearder's Celebrated Prize Silver Spinner.

For Mackerel, Pollack, and every description of Sea Fish.

(*See remarks on Whiffing.*)

352*b* No. 00, Baby spinner, unmounted, 1d. each. Ditto mounted on gut or wire, 2d. each, or 6 by post 1/3
353 No. 0, with single hook, price 2d., or 6 by post, 1/3
354 No. 1, with treble hook, price 3d., or 3 by post, 1/-
355 No. 2, price 4d., ditto, 1/3
356 No. 3, 6d.
357 No. 4, 8d.
358 No. 5, 10d.
359 No. 6, 1/-
} Postage, 2d. extra
359*a* Larger size for Bonita, Albacore, Dolphin, &c., 2/6, 3/-
359*b* Ditto, extra large and strong, suitable also for Porpoises and large Indian fish, 3/6
359*c* Ditto, with treble hook and twisted wire snood, and very strong brass swivel, 7/-

CAUTION.—Messrs. HEARDER AND SON having heard complaints of spurious imitations of their Spinners, which twist and foul the line, request purchasers to see that their name is stamped on each bait, without which none can be depended upon.

Hearder's Despatch Bait.

This bait is contrived for the speedy unhooking of mackerel when they bite greedily. It spins on the rigid shank of a single hook, thereby dispensing with the treble one. In reference to this bait, the Editor of the *Field*, No. 1,142, November 14, 1874, remarks "a small Spinner of the Archimedean type spins on the shank of a hook, which is elongated for the purpose, and a bait can also if needed be placed on the hook. The plan is certainly ingenious, and we should think would prove effective."

359*d* No. 1, 2d. each; No. 2, 3d.; No. 3, 4d.; 3 by post 3d. extra
359*e* "Kingfisher," a new bait for ocean fishing, 3/6
359*f* Ditto, with twisted wire snood, and swivel, 6/6
360 Artificial Flying Fish, 3/- to 4/-

Hearder's Plano-Convex Bait.

361 For Bass, Coal-Fish, Billet, Codlings, Mackerel, Sea Trout, &c., 1/3, or by post 1/8
362 Larger ditto, 2/-, or by post 2/3

(*See also Prize Artificial Baits amongst the River Tackle.*)

Hearder's Prize Indiarubber Sand Eel.

For Bass, Pollack, &c.: a most killing bait.
(*See remarks on Whiffing and Bass Fishing.*)

363 Plain or Spiral, with looped gut, drab colour, for Bass, 2/- per dozen, or 2/3 by post
364 Twisted gut, strong single Salmon gut or gimp, 3/- per dozen, or 3/3 by post
365 Ditto, very strong, 4/- per dozen, or 4/3 by post
365*a* Extra, 5/-, or by post, 5/4
365*b* HEARDER'S Two to One Sand Eel. This bait has a hook at the tail as well as the head. Price 4/- per dozen, or by post 4/3. Red ditto, 5/- per dozen, or by post 5/4

365*c* HEARDER's Spinning Sand Eel, sometimes known as "Capt. Toms," with brass swivel, for Bass, Pollack, &c. The peculiar form of this bait causes it to spin and dart with a life-like appearance; 4/- per dozen, or 4/3 by post. Ditto, red, 5/- or 5/3 by post

Hearder's Red Indiarubber Sand-Eel.

An extraordinary bait for large Pollack.

N.B.—This bait is allowed to be the most killing ever introduced on the Irish coast

366 Looped Gut, 3/6 per dozen, or 3 8 by post

367 Strong Single Salmon Gut, Twisted Gut or Gimp, 4/- per dozen, or 4/2 by post

368 Extra strong, 5/- and 6/- per dozen, 4d. extra by post

369 Green or Grey Indiarubber Eels, same price as Red

370 Indiarubber Sand-Eels, Drab, on eyed hooks, without gut or gimp, 2/- and 3/- per dozen, 2d. extra by post

371 Ditto, Red or Green, 3/- to 4/- per dozen, 2d. extra by post

371*a* HEARDER's Jim Crow Bait, consisting of a baby spinner with a red or grey sand-eel tail, 5/- per dozen, or by post 5 4

371*b* Ditto, Sole Skin Tail, 4/-, or by post 4/4

Hearder's Sea Flies, for Bass, Pollack, &c.

372 White or Red Flies on single or looped gut, 1/6 per dozen

373 Ditto, on strong Salmon or twisted gut, 2/- and 2/6 per dozen

374 Extra-large Flies, on eyed hooks, without gut, 2/- per dozen

374*a* HEARDER's Green Flies, with Silver Bodies, in imitation of Brit, looped gut, 3/- per dozen; twisted gut, 4/- per dozen

374*b* HEARDER's Sole Skin bait, for Bass, Pollack, and Mackerel, looped gut, 1/6 per dozen; twisted gut, 2/-

Postage, 2d. per dozen extra.

375 Artificial Shrimps and Prawns 9d. each

376 Spoon Bait, No. 1, 6d.; No. 2, 9d.; No. 3, 1/6; No. 4, 2/-; No. 5, 2/6; No. 6, 3/-

Postage, 2d. extra

376*a* American Spoon baits, with feathered tails, 2/- each, or by post, 2/4

377 Live Lugworms for Bait

Courges, or Sand-Eel Baskets.

To tow astern, keeping the Sand-eels alive

378 Small, 6/-

379 Medium, 7/-

380 Large, 8/-

Japanned Tin Treble Cases.

381 Case for Whiffing Lines, No. 00, with shifting tray, &c., 5/-

382 Larger ditto, ditto, with compartments for stock of various appendages, hooks, baits, traces, leads, &c., No. 0, 7/-; No. 1, 9/-; No. 2, 11/-; No. 3, 13/-; No. 4, 25/-; No. 5, 30/-; No. 6, 40/-

Leather Cases for Hooks and Flies.

383 Plain, 1/- to 3/-

384 Ditto, more complete, 7/-

Gaffs.

385 Strong Galvanized-iron Boat Gaff, for heavy Sea Fish, 2/6, 3/-

385*a* Ditto, extra long and large for yachts, 4/-

386 Gaff, with Hake hook to screw, and short baton handle, 1/6

387 Ditto large Hake hook, extra large Hake, 3/-

388 Ditto, with large curved hook, with handle suited to take landing net, 5/-

Gaff or Landing Handles.

389 Strong Gaff-handle, 8 to 10 feet long, in two parts, with ferrule joint for sea fishing, 8/- and 10/-

390 Ditto, 3 joints, 10/- and 12/-
391 Ditto, very strong, with screw joints, 12/- to 16/-

Telescope Gaff or Landing Handles.

392 Cane, 2 joints, 6/-
393 Ditto, 3 joints, 10/-
394 Ditto, 4 joints, 14/-

Plain Landing Handles.

395 Hazel, 1/-
396 Bamboo, 2/6
397 Ditto, superior, 3/-
398 Ditto, 4-feet long, 3/6
398*a* Ditto, bored to hold top, 4/6
399 Strong Ash ditto, 2/6
400 Shorter ditto, 2 -

Gaff-hooks.

401 Gaff-hooks to screw, 2 - and 2/6

Landing Rings, Net Rings, &c.

402 Plain Landing Ring, 1/-
403 Ditto, with joint to turn back over the handle, 5/-
404 Knuckle Joints, to suit Landing Handles, and take plain or jointed rings, 5/-
405 Folding Landing Rings, 10 inches, 3/-; 12 inches, 3/6; 14 inches, 4/-; 16 inches, 5/-; 18 inches, 6/-
406 Shrimp or Prawn Net Rings, round or oval, 1/- to 1/6
407 Ditto, D shaped, 3/- to 5/-
408 Ditto, spoon-shape (as described by Wilcocks), 15×12, 3/6; 17×14, 3/6; 19×15, 4/-; 21×18, 4/6; 24×21, 5/-
409 Iron Sockets to the above, 1/6 extra.

Shrimp, Prawn, and Landing Nets.

UNMOUNTED.

410 Shrimp Nets, 12 in. diameter, 12 in. deep, 1/6

411	Shrimp Nets,	14 in. diameter,		14	in. deep,	2/-
412	ditto	16	,,	16	,,	2/3
413	ditto	18	,,	18	,,	2/6
414	ditto	24	,,	24	,,	5/-
415	ditto	30	,,	30	,,	7/-
415*a*	ditto	extra strong twine				11/-
416	ditto	36	,,	36	,,	9/-
416*a*	ditto	extra stout twine				14/-
416*b*	ditto	42×36				12/-
416*c*	ditto	42×36, extra strong twine				16/-

417 Landing Nets for Trout. 12 inches. 8d.; 14 inches, 1/-

418 Ditto, for Salmon, 16 inches, 1/4; 18 inches, 1/6; 2 feet, 2/6

Shrimp and Prawn Nets.

MOUNTED.

419 Small Shrimp Nets, mounted with handles, 1/6 to 3/-

420 Larger ditto, on galvanized-iron rings, round or D-shape, without handles, with spike to drive, 3/6 to 12/-

421 Ditto, with screw to fit Landing Handles, 6d. to 9d. extra

422 Iron Sockets to fit screws, 1/6 extra

423 Strong Ash Handles for ditto, 4-feet, 2/-

424 Ditto, fitted with galvanized-iron screw socket, 3/6

425 Ash Pole, 6-feet 6 inches, 3/-

425*a* 8-feet ditto, 4/-

425*b* 10-feet ditto, 5/-

426 Galvanized-iron screw sockets fitted to the above, 1/6 extra

427 Pool Prawn Nets, mounted, on oval or spoon-shape rings, with screws to fit iron sockets, 15×12, 7/6; 17×14, 7/6

428 Ditto, with 6-feet 6-inch pole and iron screw socket, 12/-

429 Ditto, 19×15, complete, with pole and socket, 13/-

430 Ditto, 21×18, 14/-

431 Ditto, 24×21, 15/-

432 10 or 12-feet Mottled Cane Poles, 3/- extra

433 Prawn Nets, mounted on galvanized-iron rings for baiting, 24 inches diameter, with sling, 12/- ; 30 inches, 14/- ; 36 inches, 16/- *

434 Strand Shrimping Nets, D-shaped, with shifting pole, 7-feet long, and galvanized jointed hoop to fold down flat upon the wood cross piece, for convenience of packing, 30 inches wide, with 27 inch hoop, 22/- ; 36 inches wide. with 30-inch hoop, 25/- ; 42 inches wide, with 36-inch hoop, 30/-

435 HEARDER'S Improved Naturalist's Dredge Net, 20/- to 30/-

436 Ditto, with canvas bunt and net sides for very small objects, 20/- to 30/-

436*a* Oyster Dredge, with shackles, outriggers, and chain for detaching oysters, 35/-

Trammels.

Of improved construction, from very superior Hemp Twine, barked, roped, corked, and loaded, ready for use.

436*b*	15 fms.,	6 feet deep,	£5
436*c*	20 fms.,	ditto	£6
437	30 fms.,	ditto	£7 10s.
438	40 fms.,	ditto	£9
439	50 fms.,	6-feet deep.	£12
439*a*	60 fms.,	ditto	£15
439*b*	70 fms.,	ditto	£18
439*c*	80 fms.,	ditto	£20
439*d*	90 fms.,	ditto	£22
439*e*	100 fms.,	ditto	£24

The above sizes 8-feet deep, about 20 per cent. extra.

*These baited prawn nets are lowered from a boat or jetty by being slung to a rope, passing over a pulley at the end of an outrigger. Fish garbage is slung in the cross lines, and fastened by means of the leather slides. A weight in the bottom enables the net to sink easier. The drawing up of the net must be performed gently. They can also be sunk along shore with a buoy line and cork to mark their situation, from which they can be lifted by a long forked stick. Crabs and lobsters are often taken with these nets, as well as shrimps and prawns.

Beam Trawls.

Complete with beam, irons, and bridle ropes; best construction.

440	10-feet beam,		£7
441	12	ditto	£7 10s.
442	14	ditto	£8 10s.
443	16	ditto	£9 10s.
444	18	ditto	£11
445	20	ditto	£13

Larger sizes to order.

Otter Trawl.

Improved construction, with Otter boards. Experience shows the increasing value and convenience of this net for yachts; it packs up into a small compass and requires no beam. The Otter boards, which vary in size according to the spread of the net, are loaded with iron on the lower edge, which causes them to keep a vertical position when they reach the bottom. Each board is furnished with a belly-band like that of a kite; these are united by a very long bridle or span, as it is sometimes termed, the centre of which is either formed into a bight for attachment to the tow rope, or what is still better divided into two spans, each being furnished with an eye at the end, the eyes of one end are furnished with shackles for attachment to the belly-bands of the Otter boards, and the other pair serve for connection with the tow rope. By this means the Otter boards recede from each other as the net is drawn through the water, and spread out from each other in towing, until the mouth of the net is drawn to its full extent. The ground rope is leaded to drag the bottom, and the upper rope is furnished with corks sufficient to keep the mouth open. When the net is raised the boards close in together, and the whole net comes up like a large purse.

When required for water deeper than 10 or 15 fathoms, extra lead plates can be screwed to the Otter boards to keep them from rising off the ground. They can be made 80 or 90-feet spread, and still the principle holds good. A small steam pinnace, or a 24-feet cutter, will tow an Otter Trawl from 25 to 42-feet spread.

All who use them speak highly of the principle, and no yacht should be without one.

(*See chapter on Trawls in the treatise.*)

445*a* Otter Trawl with boards, complete, 15-feet wide at mouth, barked, corked, roped, and leaded, suitable for cutter 16 to 20-feet, £6

Pair of spans with shackles, &c. for ditto, 25/-

445*b* Ditto, 25-feet wide at mouth, barked, corked, roped, and leaded, suitable for cutter from 20 to 25-feet, £9

Pair of Spans with Shackles, &c. for ditto, £2

446 Ditto, 42-feet wide at mouth, the most convenient size for general purposes, suitable for cutter 22 to 33 feet, £11

N.B.—This trawl has been worked by a boat, Newcastle rig, 18 feet long, with an 8-feet beam, scarcely registering 3 tons.

Pair of spans with shackles, &c., for ditto, £3.

446*a* Ditto, 60 feet wide, suitable for cutter 33 feet and upwards, or say 20 to 30 or 40 tons, £17

Pair of spans with shackles, &c., for ditto, £5

446*b* Ditto, 90 feet, suitable for cutter 40 to 100 tons, £22

Pair of spans with shackles, &c., for ditto, £9

Seines.

Barked, corked,, roped, and leaded, complete for use, with purse in centre, 1½ and 2 inch mesh. These sizes of mesh refer to the difference between the centre and the wings

447 8 feet deep, 10 fms. long, £4 10s.
448 Ditto, 20 ,, ditto, £7
449 Ditto, 40 ,, ditto, £11 10s.
450 Ditto, 50 ,, ditto, £14
451 12 ft. deep, 10 ,, ditto, £5 5s.
452 Ditto, 20 ,, ditto, £8 8s.
453 Ditto, 40 ,, ditto, £14 10s.
454 Ditto, 50 ,, ditto, £17
455 16 ft. deep, 10 ,, ditto, £6 6s.
456 Dttto, 20 ,, ditto, £10
457 Ditto, 40 ,, ditto, £17
458 Ditto, 50 ,, ditto, £21
459 20 ft. deep, 10 ,, ditto, £7 10s.
460 Ditto, 20 ,, ditto, £12

461 20 ft., deep, 10 fms. long, £16
462 Ditto, 40 ,, ditto, £20
463 Ditto, 50 ,, ditto, £24

Intermediate sizes at intermediate prices.
Larger and smaller meshes at proportionate prices.

Mackerel Drift Nets.

464 Barked, roped, and corked, 6 to 10 score meshes deep, 3/6 to 6/- per fathom

SALMON, STOP, TUCK, DRAG, AND SET NETS, AND EVERY KIND OF NET TO ORDER.

Crab, Lobster, Prawn, Eel, and Conger Traps, in Wicker, Wire, or Net.

These Traps are baited in the interior with fish garbage, fastened down to the bottom; they are then weighted sufficiently to keep them at the bottom, and are lowered by being slung to a buoy line, the buoy marking their situation. They are usually set down at night and taken up in the morning.

HEARDER'S Improved Wicker and Cane Crab and Lobster Traps, with detachable bottoms, which permit the traps to be packed one within the other for economy of space.

465 Wicker, 8/-
466 Ditto, larger, 9/-
466*a* Ditto, collapsing net, 25/-

Eel and Prawn Traps.

466*b* No. 1, double entrance, 33×14×11, 12/-
No. 2 ditto 36×20×12, 14/-
466*c* Wicker Prawn Traps with movable bottoms for convenience of packing one in the other
No. 1, 16 wide at bottom, 10 high, 4/-
No. 2, 18 wide, 12 high, 5/-
467 Conger Traps of galvanized iron rod, 3 ft. 6 in. long by 1 ft. 6 in. diameter, £5
467*a* Buoy Line for ditto, 7/6
468 Portable Fish Traps, for all kinds of ground fish, drum shape, of net stretched on iron hoops, with inverted conical ends, which close in together for packing, 25/- to 30/-

469 Galvanized Wire Prawn Traps—
No. 1, 1 ft. 1 in. diameter, 12/-
,, ,, improved, 14/-
No. 2, 1 ft. 3 in, diameter, 14/-
,, ,, improved, 16/-

470 Galvanized Wire Crab and Lobster Pots—
No. 1, 2 ft. diameter, 20/- No. 1, extra strong, 26/-
No. 2, 2 ft. 6 in. ,, 28/- No. 2, ,, 34/-
No. 3, 3 ft. ,, 40/- No. 3, ,, 42/-

471 Galvanized Wire Eel Traps—
No. 1, Single entrance, for rivers, 30×13×10, 16/-
No. 1, ditto, extra strong, 20/-
No. 2, 36×14×11, 20/-
No. 2, Extra strong, 23/-

471*a* Ditto, double entrance, for canals and still waters—
No. 1, 36×14×11, 22/- Extra strong, 24/-
No. 2, 36×20×12, 26/- ,, 32/-
No. 3, 36×24×13, 31/- ,, 40/-

471*b* Buoy Lines suitable for any of the preceding traps, 5/- each

Spears, Grains, &c.

472 Fluking Forks, plain, and Poles, 5/-
473 Ditto, with poles and sockets to unscrew, 6/6
474 Fluking Pick, with 7 and 8 spikes, screwed socket, and 8 ft. pole, 13/- to 20/-
475 Eel spears, without poles, four prongs, 5/-
476 Ditto, five prongs, 6/-
477 Ditto, six prongs, 7/-
477*a* Ditto, seven prongs, 8/-
478 Shifting Grains or Spears, 3 in., 4/-; 4 in., 4/6; 5 in., 5/-; 6 in., 5/6; 7 in., 6/-
479 Harpoons, plain, 3/6 to 5/-
480 Ditto, winged, 5/- to 7/-
480*a* Otter Spears, 1/6 each
480*b* Ditto, with screwed socket and pole, 6/6
480*c* Otter Leaping Poles, with iron socket and screwed ends, 6/6

MISCELLANEOUS.

481 Tell-Tales, or Spreaders of Cane, for Whiffing or Drift Lines, with clamp to fix on gunwale of boat, 1/6
482 Brass Disgorgers for large fish, 1/-
483 Sea Fishing Baskets (as described by Wilcocks), 5/-
484 Ditto, with cover, 6/-

(For finer Baskets, see River Tackle.)

85 Sportsman's Balances, brass—
To weigh 1 lb. per ½ oz., 5/-
,, 2 lbs. ,, 1 oz., 6/-
,, 7 lbs. ,, ½ lb., 4/-
,, 12 lbs. ,, ½ lb., 4/6
,, 20 lbs. ,, ½ lb., 6/-
,, 40 lbs. ,, ½ lb., 8/-
,, 60 lbs. ,, ½ lb., 10/-
486 Ditto, with German silver plate indicator—
To weigh 5 lbs. per ¼ lb., 7/6
,, 10 lbs. ,, ¼ lb., 8/-
,, 20 lbs. ,, ½ lb., 8/-
,, 30 lbs. ,, ½ lb., 9/-
487 Twisting Machines, 3 hooks, 9/-
488 Ditto, improved, with table clamp, 12/-
489 Ditto, 4 hooks, 13/-
490 Wax, in boxes, 2d.
491 Varnish, in bottles, 1/- to 4/-
492 Netting Needles, steel, 6d. to 8d.
493 Ditto, wood, tongued, 1/-
494 Netting Meshes, 3d. to 4d.
495 Wilcocks's "Sea Fisherman," 12/6, by post, 7d. extra

RIVER TACKLE.

RODS.

(*For Youths' Ash Rods, see page* 23.)

496 Fly Rods, 3-joint, plain, 2/-
497 Ditto, ringed, 3/6
498 Ditto, ringed and winch-fitted, 5/6
449 Ditto, ringed, brazed and winch-fitted, 8/6
500 Spears, with sockets, 2/- extra
504 Fly Rods, 4-joints, ringed, brazed and winch-fittings, in bags, 10/6
505 Ditto, with socket and spears, 12/6 to 16/-
505*a* Ditto, better quality, 10 and 11 feet, 21/-
506 Ditto, 12 feet, 22/-
506*a* 13 feet, 25/-
506*b* 14 feet, 28/.
507 Ditto, screw ferrules, 26/- to 30/-
508 Ditto, brazed tongues, 26/- to 30/-
509 Best 4-joint Rods, hollow butt and spare top, 26/- to 35/-
510 Ditto, with screw ferrules, 30/- to 35/-
511 Very superior Rods, with extra finish, brazed tongues, 30/- to 42/-
512 Fly Rods, 5-joint, from 21/- to 45/-
513 Spare Tops, lancewood, 1/- to 2/6
514 Ditto, best bamboo, 3/6 to 5/-
515 Copham's Fly Rod, 4-joint, 30/-
515*a* Ditto, hollow butt and spare top, 40/-
516 Copham's Split Cane Rods, from 4 guineas
517 Greenheart or Washaba Rods, 4-joint, solid butt, 24/-
517*a* Ditto, hollow butt and spare top, 30/-
517*b* Ditto, brazed tongues, 35/- to 40/-

(*See also Sea Tackle.*)

BEST BAMBOO RODS.

518 3 joints, lancewood top, 4/-
519 4 ditto, 6/-
520 3 ditto, ringed, brazed, spliced top, 7 -
521 4 ditto, ditto, 8/6
522 5 ditto, ditto, 10/-
523 6 ditto, ditto, 12/-

SUPERIOR BAMBOO, WINCH-FITTED.

524 4 joints, superior bamboo, with spliced top, ringed and brazed, 12/-
525 5 ditto, 14/-
526 6 ditto, 16/-

BAMBOO TROLLING RODS.

527 3-joint, brazed and ringed, 9/- and 10/-
528 Ditto, 4-joint, ditto, 11/- and 12/-
529 Ditto, 5-joint, ditto, 13/- and 14/-
(*The above Winch-fitted 2/- each extra.*)

WALKING-STICK RODS.

530 3-joint, ringed, lancewood top and screw ferrule end, 7/-
530*a* 4-joint, ditto, 12 -
530*b* Ditto, ash butt, 18/-

SALMON RODS.

531 4-joint, 2 tops, 16 feet, 40/- and 50/-
532 Ditto, ditto, 18 feet, 45/- and 60 -
533 Ditto, 3 tops, 60/-
534 5-joint, 2 tops, 66/
535 5-joint, 3 tops, 70/- and 80/-

GENERAL RODS.

536 4-joint, 3 tops, 30/-
537 4-joint, 4 tops, 33/-
538 5-joint, 3 tops, 34/-
539 Ditto, 4 tops, 36/-
540 Ditto, 5 tops, 40/-
541 6-joint, 5 tops, 45/-

BAMBOO GENERAL RODS.

542 6 joints, 2 tops, 18 feet, with bag, brazed for winch, 29/-
543 6 ditto, 3 tops, spear and bag, brazed for winch, 32/-
(*See also Sea Rods, page* 25.)
544 Rod Bags, 1/- to 3/6
545 Rod Spears, 6d. to 1/6

RODS OF EVERY DESCRIPTION MADE TO ORDER.

Repairs promptly and properly executed.

FLY LINES, TRACES, &c.

545*a* Patent Trout Line, 1d. per yard
546 Ditto, Silk and Hair. 2d. and 3d. per yard, in lengths from 10 to 50 yards
547 Patent Salmon and Grilse, 50 to 100 yards, ditto, 3d. to 4d.
548 Platted Silk and Hair, 4d. per yard
549 Silk Line, 1½d. and 2d. per yard
550 Platted ditto, 2d. and 2¼d. per yard
551 Prepared Waterproof ditto, 2d., 2¼d., and 2½d. per yard
552 Hair Line, 1d. to 3d. per yard. *See page* 11
553 Flax Lines. *See page* 10
554 Fine Gut Casting Lines, Trout, 3d. per yard
554*a* Finer ditto, 4d. per yard
555 Ditto, finest drawn gut, 6d. per yard
556 Ditto, Salmon, 6d. per yard
557 Ditto, stouter, 9d.
558 Ditto, Marana, 1/-
559 Twisted Gut. *See page* 11
560 Platted Gut Casting Lines. *See page* 11
561 Ditto spinning Trace, with swivel, 2/6 to 3/6
562 Fine Fly Gut, 5/- per hank
563 Trout and Salmon Gut. *See pages* 11-12
564 Gimp. *See page* 11

FLIES, BAITS, &c.

565 Gut Hooks, 6d. and 1/- per dozen
566 Stewart's Worm Tackle, 2/- per dozen
567 Trout Flies in endless variety, 1/6 per dozen

568 Soltau's 18 Sorts, as recommended in his work on Trout Fishing, 1/6 per dozen

N.B —These Flies are all accurately made from Mr. Soltau's original patterns.

569 Artificial Peel Flies, 2/- and 3/- per dozen
570 Ditto, Salmon, 6d., 9d., 1/- to 7/- each
570*a* Mahseer Flies, for Indian fishing, 1/- each

Flies of all kinds made to pattern.

571 Artificial Bluebottles, Grasshoppers, Caterpillars, Fern-webs, Beetles, Spiders, Bees, Moths, &c., 5d. to 6d. each ; Worms, 4d. each
572 Ditto Shrimps and Prawns, 9d.
573 Ditto Frogs, 2/-
574 Ditto Mice, 2/6
575 Spoon Baits. *See page* 31
576 HEARDER's Prize Plano-convex Minnow for Trout, Salmon, Pike, Mahseer, Bass, Perch, Dace, &c. This extraordinary spinning bait has completely eclipsed all others for River and Lake Fishing. It spins on a central stem without turning the hooks, which consequently always strike the fish in the direction of the point. It is the only bait that will kill in clear, still water and bright sunshine. Prize medals have been awarded to it from English and Continental Exhibitions. None are genuine but those stamped *Hearder, Plymouth.*
577 No. 1, for Trout, Perch, Dace, &c., 1/- each, or by post, in a box, 1/2
578 No. 2, for Salmon-Peel, Trout, Perch, Dace, &c., 1/3, or by post, 1/6
579 No. 3, for Salmon, 1/6, or by post, 1/9
580 No. 4, for Salmon, Pike, &c., 2/-, by post, 2/3
581 No. 5, ditto, 2/3, by post, 2/8
582 No. 6, ditto, 3/-, by post, 3/6
583 No. 7, Gudgeon size, 3/6, by post, 4/-
584 HEARDER's Original Devon Minnow (sometimes known as the Angel Minnow), 2/6 to 3/6
585 Artificial Minnows of every description, 1/6 to 3/6

585*a* Phantom Minnows, No. 2, 2/6; No. 3, 2/6; No. 4, 2/6; No. 5, 3/-; No. 6, 3/6; No. 7, 4/-; No. 8, 4/6
586 Gudgeons, 4/- to 6/-

MISCELLANEOUS.

587 Fly Books and Cases, 1/- to 7/-
587*a* Ditto, Pigskin, with leather pockets, 7/- 8/- 10/-
588 Superior ditto, Russia leather, 6/- to 12/-
589 Ditto, extra size, very complete for general purposes, 10/- to 20/-
590 Fishing Baskets, best French make, 3/6, 4/6, 5/6, 6/6, 7/6, straps, 1/6
590*a* Webbing Straps, 2/6
591 Baskets, English, 2/6 and 3/6
592 Waterproof Fishing or Game Bags, 7/-, 9/- to 11/-
593 Best Box Swivels, with or without hooks, 1/6 per dozen (steel)
594 Larger ditto, 2/- and 8/-
595 Buckle and Spring Swivels, 2/- per dozen
596 Dead Bait Boxes, 2/6 to 5/-
596*a* Spinning Tackle ditto, 5/6 to 7/-
596*b* Japanned Bait Boxes, 6d. to 2/6
596*c* Zinc Bait Kettles, 7-inch, 4/6; 8-inch, 5/6; 10-inch, 7/-
597 Kirby and Limerick Hooks, 1/- per 100
598 Kendall, Sneckbend, &c., 2/- per 100
599 Superfine Limerick Hooks, from 2/- per 100; for the extra large size, *see page* 22
600 Double or Treble Hooks, 1/6 to 5/- per dozen
601 Gaff Hooks, 2/-, 2/6
602 Ditto, with clearing Knives, 3/- to 4/-
603 Clearing Knife Hook, to be used on the point of a rod, 2/6
604 Folding Hook and Knife, 4/6
605 Gaff Handles, 2/6
606 Bamboo, hollow, ditto, to contain tops, 2/6 to 3/6
607 Telescope Handles, 6/- to 15/-
608 Landing Nets, from 1/-
609 Plain Rings, 9d. and 1/-
610 Jointed ditto, 3/- to 5/- *See page* 32
610*a* Sport Nets, 16/- to 20/-

611 Pocket Spring Balance, 5/- to 10/- *See page* 39
612 Baiting Needles, 2d. and 3d. each
613 Spring Swivels, 2/- per dozen
614 Disgorgers, 2d. and 3d. each
615 Brass Clearing Rings, 2/- each
616 Rod Rings, 2d. per dozen
616*a* Ditto, German Silver, 3d. per dozen
617 Wire Upright Rings, 1/- to 4/- per dozen
618 Solid ditto, 4d. to 6d. each
619 Large Wire Top-end Rings, 9d. per dozen
620 Solid ditto, 4d. each
621 Split Steel Rings, 3d. to 6d. per dozen
622 Iron Spikes, for butt-end to drive, 6d.
623 Ditto, to screw, 9d.
624 Ditto, bright, 1/-, 1/6
625 Butt-end Ferrules, with screw button, 1/- and 1/6 each
626 Fishing Rod Ferrules, from 3d.
627 Split Shot, 1½d. per box, or in bulk, 1/4 per lb.
628 Pipe Leads, 6d. to 2/- per dozen
628*a* Bank Runners, 1/-
629 Trimmers, 1d. to 4d.
630 Spring Snap Hooks, 1/6 to 2/-
631 Pike Tackle, Pike Spinning Tackle, with trace, 1/4; Francis's Pike Tackle, 1/-; Live Bait Tackle, with trace, 1/4; ditto, without trace, 8d.; Gimp Traces for Pike Tackle, 1/3 each. Wood's Spinning Tackle, with trace, 2/6
632 Trout Spinning Tackle, 1/6
632*a* Pike Tell Tale Cork Trimmers, 5-inch, 2/6
633 Scissors, 3/- and 3/6 per pair
634 Fly Pliers, 3/-
635 Shot Pliers, 3/6
636 Tweezers, 2/-
637 Fishing Stockings, from 21/- per pair

ARCHERY.

HEARDER AND SON, in submitting the following price-list of their Archery, guarantee every article to be equal in quality to the productions of any maker in the United Kingdom, whilst their prices will be found considerably lower.

GENTLEMEN'S ARCHERY.

639 Self Bows, 10/- to 15/-
640 Two and three-piece ditto, 21/- to 30/-
641 Self Yew ditto, 40/- to 105/-
642 Backed Yew ditto, 45/- to 105/-
643 Best Flemish Bow Strings, 1s. 3d., whipped 1s. 6d.
644 Self Arrows, per dozen, 8s. to 16s.
645 Footed ditto, 18s. to 24s.
646 Quivers, 5s. 6d. to 6s. 6d.
647 Belts, Pouch, and Quiver, from 4s.
648 Arm Guards, 2s. to 10s. 6d.
649 Gloves, 1s. 9d.
650 Elastic Finger Tips, 2s. 6d.
651 Screw ditto, 3s.

LADIES' ARCHERY.

652 Self Bows, 5s. to 12s.
653 Two and three-piece ditto, 18s. to 25s.
654 Self Yew, 21s. to 40s.
655 Backed Yew ditto, 21s. to 40s.
656 Best Flemish Bow Strings, 1s., whipped, 1s 3d
657 Self Arrows, per dozen, 6s. to 13s.
658 Footed ditto, 15s. to 21s.
659 Quivers, 4s., 5s., 6s.
660 Belts, Pouch, and Quiver, 4s. to 6s.
661 Arm Guards, 2s. to 10s. 6d.
662 Gloves, 1s. 3d. to 1s. 9d.

663 Elastic Finger Tips, 2s. 6d.
664 Screw ditto, 3s.
665 Targets, 4s. to 16s. each
666 Target Stands, 2s. per foot
667 Grease Cups, 1s. 6d.
668 Tassels, 1s.
669 Scoring Tablet and Marker, 2s. 6d.
670 Ivory ditto, 3s. 6d.
671 HEARDER's Scoring Cards and Targets, per dozen, 1s. to 2s.

Bows and Arrows repaired at the shortest notice.

Cross-bows, Youth's Bows, Arrows, and Targets.

Bows made to order or regulated to strength.

ARCHERY CLUBS SUPPLIED.

CROQUET.

672 Jacques's Croquet of every quality and at his list prices
673 Croquet Sets repaired, repainted, and deficiencies supplied
674 Croquet Stands, mahogany, 21s.

CRICKETING.

675 Men's Bats, 5s. to 7s.
676 Excellent Practice Bats, 6s. to 8s.
677 Best Match Bats, 7s. 6d. to 9s.
678 Polished ditto, 8s. to 11s.
679 Ditto, Willow dove-tailed handle, 9s. to 11s.
680 Ditto, Cane, with Ash cheeks, 16s.
681 Best Solid Cane, by different makers, 18s. to 21s.
682 Ditto, Whalebone, 21s.

683 Bats re-handled, warranted Ash, 3s. 6d.; Cane, with Ash cheeks, 6s.; solid Cane, 7s. to 10s.
684 Youths' Bats, from 10d.
685 Ditto, polished, 3s. to 6s.
686 Ditto, Cane handle, 13s. 6d. to 16s.
687 Men's Wickets, Ash, 5s. to 6s. 6d.
688 Ditto, brass bound, 7s. 6d.
689 Ditto, best Lancewood, plain, 8s. to 10s.
690 Ditto, very superior, with brass ferrules, 11s.
691 Ditto, Greenheart, 7s. and 8s.
692 Ditto, brass bound, 9s. to 11s.
693 Iron Shoes to Cricket Stumps, 3s. extra
694 Youths' Wickets, 1s. 4d. to 4s. 6d.
695 Best Treble-seam Match Balls, 7s. each, or 72s. per per dozen
696 Double-seam ditto, 6s. each or 66s. per dozen
697 Ordinary Practice Balls, 5s.
698 Youths' Cricket Balls, good quality, 1s. to 4s.
699 Common ditto, from 2d. to 1s.
700 Men's Leg-guards, stuffed, 9s.
701 Superior ditto, Cork or Cane, 10s. to 12s.
702 Batting Gloves, per pair, 7s. to 9s.
703 Wicket-keeping Gauntlets, per pair, 10s.
704 Long-stop Gloves, 8s.
705 Cricket spikes, screwed, each, 3d. to 7d.
706 Ditto, with plates, 3d.
707 Lillywhite's Scoring Books, 12 matches, 5s.; 24 ditto, 8s.; 48 ditto, 14s.; Guide, 1s,
708 Hearder's Scoring Sheets, per dozen, 2s. 6d.
709 Laws of Cricket, each, 6d.
710 Long-stop Nets, with plain poles, 20s. 30s.
711 Ditto, with jointed poles for packing, 35s. to 40s.
712 Cricket Chests to order
713 Cricket Bags, from 15s.

CRICKET CLUBS SUPPLIED ON THE BEST TERMS.

RACKETS, FIVES, ETC.

714 Best Rackets, 12s. 6d.
715 Second quality ditto, 10s.
716 Youths' ditto, from 8s. to 10s.
717 Rackets, re-strung, &c.
718 Jefferies' best Racket Balls, 2s. per dozen, or 21s. per gross (cash)
719 Jefferies' Best Racket Shoes, 14s. per pair
720 Hand and Fives Balls, per dozen, 4s. to 6s.
721 Tennis Balls, per dozen, 1s. to 6s.
722 Fives Bats, 2s. 6d. to 4s. each
723 Hockey Sticks, 3s. to 10s. per dozen

FENCING AND SINGLE-STICK REQUISITES.

724 Fencing Foils, per pair, from 6s. to 14s.
725 Ditto Masks, 10s. to 14s. per pair
726 Ditto Gauntlets, 10s. per pair
727 Single-sticks, 5d. each, or 4s. per dozen
728 Baskets for ditto, 8s. per dozen
729 Single-stick Helmets, cane, per pair, 15s.
730 Ditto, ditto, wire, 30s.
731 Ditto, ditto, superior, Government pattern, 60s.

ATHLETICS.

732 Foot Balls, common, 4s. to 6s.
733 Ditto, best hide, with strong vulcanized Indiarubber bladders, 10s., 13s., 16s., 18s.
734 Rugby Balls, 16s. to 20s.
735 Indiarubber Bladders for Foot Balls
736 Indiarubber Balls, solid or hollow, in great variety
737 Quoits, Steel, black

738 Ditto, polished
739 Life Preservers
740 Boxing Gloves, per set, 10s. 6d. to 15s.
741 Swimming Belts
742 Swimming Corks, 2s.
743 Skates, per pair, 6s. to 25s.
744 Chest Expanders, from 2s.
745 Dumb-bells, plain, 4d. per lb.
746 Ditto, Leather handles, 6d. per lb.

INDIAN CLUBS.

747 4 to 30 lbs. per pair, at 1s. 4d. per lb.

GYMNASIUMS FITTED WITH EVERY APPLIANCE.

WALKING STICKS.

748 Malacca, Rattan, and other Canes, plain or elaborately mounted in silver or ivory
749 Pimento, Orange, Palm, Olive, Myrtle, Russian Thorn, and every variety of Walking Stick
750 Ivory and Silver Mounts
751 Walking Sticks trimmed and mounted to order
752 Sword and Dirk Sticks
753 Life Preservers, &c.
754 Walking-stick Chairs, 8s. to 12s.
755 Camp and Garden Stools, 2s. 6d. to 4s.
756 Ferrules of all kinds

CRUTCHES.

757 Crutch, plain, 5s. to 7s. each
758 Ditto, with springs, 16s.
759 Ditto, plain double Crutch, with cross handle, 7s. to 10s.
760 Improved spring Crutch, with oval cross handle, 25s.

Crutches made to order.

MISCELLANEOUS.

761 Chessmen, &c.
762 Billiard and Bagatelle Balls
763 Metal, Wood, and Ivory Turning

764 Ivory and Hard Woods
765 Writing Frames for the Blind

General Repairs of Fancy Goods.

ENGINEERING ARTICLES.

766 Glass Water Gauge Tubes, all sizes
767 Indiarubber Gauge Rings
768 Engine Packing Rubber and Canvas in sheets
769 Ditto Rubber and Canvas Rope Packing
770 Vulcanized Rubber for Hot Water Valves
771 Ditto Valves of any shape to order
772 Ditto Indiarubber Sheet of any thickness
773 Ditto Flange and Socket Washers
774 Hose-pipe of Rubber and Canvas, to stand heavy pressure
775 Solid Indiarubber Flexible Gas Tubing, with or without internal spring

CAT-GUT FOR LATHES AND OTHER MACHINES.

776 Small Cat-Gut for Clocks, &c.
777 Ditto for small Lathes
778 Ditto for larger Lathes, Printing and other Machines. Steam Engines, &c., $\frac{1}{4}$ inch to $\frac{3}{4}$ diameter
779 Hooks and Eyes for Cat-Gut, 1-16th to $\frac{3}{4}$ inch

Turning Lathes, Slide Rests, Chucks, Manhattan Twist Drills, and all Turning appliances to order.

UMBRELLAS, PARASOLS, &c.

HEARDER & SON'S

UMBRELLA AND PARASOL MANUFACTORY.

ESTABLISHED 1770.

HEARDER AND SON trust that the reputation which their Manufactory has enjoyed for more than a century is a sufficient guarantee for the genuine quality of their goods.

'80 Gingham Umbrellas
'81 Superior Steel frame ditto
'82 Ditto, best Whalebone
'83 Ditto, Chaise ditto
'84 Alpaca Umbrellas
'85 Ditto, best Whalebone
'86 Zanella Umbrellas
'87 Ditto. best Whalebone
'88 Silk Umbrellas, Steel, with the new patent lock rib, which prevents the frame from getting twisted in opening
'89 Ditto, Whalebone, 12s. to 30s.
'90 White Cotton Umbrellas, for hot climates
'91 Parasols, Sunshades, &c., from 2s.

Umbrellas, Parasols, Sunshades, &c., Covered, Lined, Repaired, or Made to Order at the shortest notice.

UMBRELLA AND PARASOL MOUNTINGS.

A great variety of Silks, Lavantines, Alpacas, Lustres, Zanellas, Ginghams, &c.

OIL SILK.

792 Oil Silk Sponge and Brush Bags
793 Ditto Bathing Caps
794 Ditto Bonnet Caps
795 Black Japanned Cambric
796 Black Oil Silk
797 Waterpoof Wrapper Cloth
798 Ditto Bed Sheeting

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This will be found the most compact, portable, and efficacious machine yet invented. The little mahogany box (about six inches cube) contains a Galvanic Machine of 20 degrees of power, battery, bottle of dilute acid (ready for use), conducting wires, and insulated directors, adapted for all purposes. Price £3 3s. The same Machine, of 24-power, £3 15s.; 32-power, £4 10s.

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The following are some of their advantages:—A 2 ft. 6 in. Stove will cook for six to ten persons at about 2d. per day; and larger Stoves in proportion. They burn all kinds of fuel and ashes over and over again. The flues are all complete in the Stove; so there are none for the mason to

make, and very little masonry is required in fixing, and the flues will go two to six months without cleaning, whilst other stoves must be cleaned at least twice a week. At the Bath and West of England Exhibition, held at Plymouth in 1873, one of these stoves stood on a wheelbarrow in the open air, furnished with about six feet of funnel, and was wheeled about whilst the operations of baking and boiling were being carried on, even though rain fell copiously upon the stove frequently during the time. Hence these stoves may be fixed in any convenient part of the kitchen, and have their flues conducted into the chimney.

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HEARDER & SON'S

GUIDE TO SEA-FISHING

AND THE

RIVERS OF SOUTH DEVON.

PART FIRST.

THE RIVERS.

J. N. HEARDER AND SON have been induced to publish the following brief particulars relative to the Rivers in the neighbourhood of Plymouth from their being almost daily required to give verbal instructions to gentlemen, strangers to Plymouth, who are desirous of following their favourite recreation of fishing. The information herein contained, is not only derived, in most cases, from their own personal experience, but also from that of some of the best fishermen in the neighbourhood, who have very kindly, at their request, communicated to them the result of their observations.

HEARDER'S Fisherman's Map of the Rivers and Coast of South Devon, embracing the district from Exmouth to Looe and Oakhampton to the Eddystone. Price 1s.; or 2s. 6d., mounted and bound for the pocket; forms a most useful Companion to their Price List and Treatise on Sea and River Fishing. It contains all the

Fishing Stations alluded to in their description of the South Devon Rivers, and the various Marks for the best fishing spots about the Coast and Harbour.

The Rivers in the immediate vicinity of Plymouth are small, rocky, and rapid; abounding in stickles and pools. The Tamar, Tavy, and Dart are the three largest; these in some places are broad and deep, and would afford in the season good Salmon fishing. The Trout in these streams are small, but very abundant and sweet-flavoured: a half-pound fish is considered a fine one, though fish of a much larger size—even as much as three or four pounds—are occasionally taken. A good sportsman will catch from four to eight dozen per day. Truff, or Sea-trout, are sometimes met with three or four pounds in weight, which afford good sport; and in May, August, and September there is an abundance of Peel. On the Moors the fishing is generally open, but in the valleys frequently woody. The scenery is exquisitely varied and picturesque. A 10 or 12 ft. light rod, with about twenty or thirty yards of line, will be best adapted for general purposes. The best time for fishing is from ten till four, up to June: but after that month the fishing in the middle of the day is frequently not so good, but is better earlier and later. Towards the latter end of the season particularly, the white moth is a killing fly for peel if used late in the evening. A few days' rain will flood the rivers; and the first or second day after a flood, if the weather be fine, is the best time, as they quickly run fine again. The flies should be small, and dressed on 10, 11, or 12 Kirby or Limerick hook. The fishing must be very fine and careful: the banks being high, it is always better to fish up the stream. Two Flies only should be used, and the most useful are a Blue Stream and a Red Bob. Many sportsmen never use any others; but each has his taste. In Mr. Soltau's work on the Trout Fishing of Devon and Cornwall will be found

the eighteen sorts which he selected as best suited to the Rivers of Devon, and the numbers alluded to in the following remarks have reference to Mr. Soltau's Flies. As a general rule, however, it may be observed that Red and Blue Hackles, with or without Gold or Silver Twist, will kill throughout the year. The March Brown is also a useful Fly, not only in windy weather on the moors, but in bright, hot weather in the valleys. The Black Palmer and Gnat will generally kill in the valleys; and the Partridge, Badger, Grouse, and Drake Flies are useful on the moors.

In addition to the Fly fishing, abundance of good sport may be had with the Minnow; but as this efficacious little bait is only found in two or three of our rivers, the angler is reduced to the necessity of substituting an artificial one for the real one.

With Hearder's Plano-convex Minnow, however, the angler is rendered almost independent of the live bait, since the testimony of hundreds of the best fishermen of the day goes to show that it far excels any they have ever before met with. It is equally efficacious for Trout, Peel, Salmon, Perch, Dace, and Pike. The condition of the river does not appear to interfere with its success; for whether the stream be full, or fine and clear as crystal, its attraction appear irresistible. It even takes Trout most readily in a clear pond or reservoir in bright sunshine. (See page 13.) On the Irish waters it is extolled far beyond all other baits. In India it takes the Mahseer, and on the sea coasts Bass and almost every kind of fish.

Some portions of our streams are so wooded as to leave the angler the only alternative of dapping, and here, if he do not object to this kind of sport, and will use Hearder's artificial Blowing-flies, Fern-webs, &c., he will certainly be rewarded with the finest fish in the river.

Peel do not visit all the rivers at the same season, but some in May, and others later. The Salmon Fishing, such as it is, begins, according to the New Salmon Fisheries Act, on the 1st February, and terminates on the 1st November, with the rod and line; but no netting is allowed between the 1st of September and the 1st of February, under heavy penalties. Previously to the carrying out of the provisions of the Salmon Fisheries Act by the various Boards of Conservators, no one ever calculated on meeting with Salmon fresh from the sea earlier than the end of July or beginning of August, from which time up to the middle or end of December the fish are in their prime, January being the chief spawning season; hence the South Devon Rivers may be classed among the late ones.

From February to June great numbers of unseasonable fish are to be met with during their return to the sea. Since the restrictive operations of the Salmon Fisheries Act, however, accidents have occurred which seem to show that if proper facilities were afforded for the passage of Salmon to the upper waters we should have visits from spring as well as autumn fish.

From February to April, and sometimes May, the rivers contain an abundance of White Fish and Salmon fry; but as these are all classed amongst the migratory fish, the taking of the young of which is prohibited by the new Salmon Fisheries Act, the sportsman should be careful to throw such fish in again immediately, as the possession of them incurs a very heavy penalty. They may be easily distinguished from the Trout, being much whiter. The use of Salmon roe for bait, or even the possession of it, is strictly prohibited.

The following remarks will be necessarily brief, as they are not intended to teach sportsmen how to catch fish, but how to have the opportunity of doing so.

Under the provisions of the Salmon Fisheries Act, the rivers in South Devon (with few exceptions) are now

under the surveillance of Boards of Conservators, who, in conjunction with the various landowners, exercise extreme vigilance in the protection of the Salmon and the prevention of poaching. The Tamar and Plym Board of Conservators embrace in their district the following rivers, namely: The Yealm, Plym with its tributaries Meavy and Cadover, Walkham, Tavy, Tamar, Lyd, Inney, and Nottar, or Lynher. The Avon and Erme are protected through certain portions of their length by the Avon Fishery Board, and the Dart by the Dart Conservancy Board.

Salmon licenses, season and day tickets, for all of these rivers, or in exceptional cases for single rivers, may be obtained, together with full particulars, at Hearder and Son's, 195, Union Street, Plymouth, the agents.

THE PLYM.

The Plym is the river nearest to Plymouth; it rises on Dartmoor under the name of Meavy, which name it retains as far as Shaugh Bridge, where, being joined by the Cadover, a stream which also rises on Dartmoor, it takes the name of Plym, and flows down by Saltram into Catwater. The course of the Meavy is on the average from north-east to south-west; and that of the Cadover, nearly from east to west. A portion of the Meavy is the property of Sir Trayton Drake; but the remaining portions, together with the Cadover and Plym, as far as Cann Quarry, belong mainly to Sir Massey Lopes, Bart., of Maristow. Both these gentlemen have delegated power to the Tamar and Plym Fishery Board of Conservators to grant fishing tickets in accordance with their regulations.

From Cann Quarry to the mouth of the Plym, a dis ance of about three miles, the river belongs to the Right Hon. the Earl of Morley. The fishing is leased

to Soltau Symons, Esq., of Chaddlewood, who, with extreme liberality, grants a season ticket to any gentleman (holding a license) applying to him for it.

These rivers are rather woody, except on the moor. The Plymouth Leat is taken out of the Meavy, a mile or two above Meavy Town; above this, therefore, the river is larger, and fishing is better. The river may be approached first at Long Bridge, close to the Marsh Mills Station on the Tavistock Railway, about three miles from Plymouth, from whence it may be fished to either of its sources; or it may be also approached from the Tavistock Road, by taking any of the turnings which lead to Bickleigh, Shaugh, or Meavy; or from the Bickleigh Station on the Tavistock Lines which is very near to Bickleigh Bridge. The Marsh Mills Station, on the same line, sets the fisherman down at the mouth of the river.

Shaugh Bridge, at the junction of the Meavy and Cadover, is about two miles from the Bickleigh Station and this is the best spot at which to commence fishing, as the portion of the river from Shaugh down to Bickleigh is strictly preserved as spawning ground. The Meavy road (see map) turns off from Roborough Down a short distance beyond Roborough Rock; but the Horrabridge Station now affords the easiest mode of access to the pedestrian, as it enables him to reach the Plymouth Leat Weir with little trouble, above which the river is considerably large and the fishing much better. Starting from the Station, let him proceed at once to Dousland Barn or Manor Inn, where he will be well cared for should he make it a resting-place. Here, leaving the main road, let him take the path leading from the back of the Inn until he joins the Dartmoor Railway, proceeding along which, he will soon come in sight of the river, and will drop in upon a road which will conduct him to Sheepstor Bridge. He may, if he likes, commence fishing here, as the Weir is a mile or so

further up, but there is some very good fishing at this spot. Should he, on the other hand, prefer fishing down the stream, he will find it a good day's work to follow it down to Shaugh Bridge, where he can knock off and return to the Bickleigh Station.

The best winds are from south to west; if east or north, expect no sport. After a flood, the Cadover is beer-colour, and fish generally sport well, taking the Red with Gold Twist, Blue and Brown Flies; or Nos. 1, 5, 6, 7, 8, and 10 of Soltau's. In the autumn there is some capital Peel and Salmon fishing in the lower water from Long Bridge to Cann Quarry.

THE YEALM.

The Yealm is the next river on the eastern road, running from north to south, and averaging about seven miles from Plymouth. It crosses the two main eastern roads at Yealmpton and Lee-Mill Bridge; from the latter, which is highest up the stream, to the mouth of the river, the fishing is preserved by the proprietor, Baldwin W. J. P. Bastard, Esq., of Kitley; and above Lee-Mill it belongs to Captain Pode, of Slade Hall, and other gentlemen, who offer no impediment to the fair sportsman. The stream formerly contained some fine Trout, and below the impassable Weir at Yealmpton there used to be some good Peel fishing, but of late years the refuse from the Paper Mills at Lee Mill has swept the river almost clear of fish, even eels can scarcely exist there. Above Lee Mill, however, there are still some good fish. Being rather woody, the river is well adapted for dapping or worm fishing, though towards the moor it is rather open, and better for fly fishing.

The Yealmpton Inn, at Yealmpton, seven miles from Plymouth, is about a quarter of a mile from the river,

and affords every desirable accommodation. Good stabling is always procured at Lee-Mill Bridge; and the Cornwood Station of the South Devon Railway is about a quarter of an hour's walk from the river.

THE TAVY.

This river is under the conservation of the Tavy Fishing Association, who co-operate with the conservators of the Tamar and Plym district, so as to render the tickets of the two conservancy boards available to the holders of either.

The river is situated about 14 miles from Plymouth, on the north road, flowing south-west into the Hamoaze. The Trout fishing above Denham Bridge is considered superior to that below it; but the Peel, Truff, and Salmon fishing below amply compensate for the want of Trout. The Peel fishing begins about the latter end of May, or the early part of June, and may be continued until the latter end of October; and the Salmon-trout and Salmon begin to take the fly in July and August. Denham Bridge is about two and a half miles from the Horrabridge Station, on the Tavistock Railway, and about a mile and a half from the rock on Roborough Down, near which point the road branches off from the Tavistock Road. The village of Buckland Monachorum lies near Denham Bridge, and affords tolerable accommodation for man and horse.

Just below Tavistock a little insignificant stream, the Lumburne, flows into the Tavy. It is too small to be fished with a fly, but the natural or artificial Blowing-fly at the end of a dapping collar, or the worm, if the fisherman do not object to the use of it, will ensure some very fine fish from this unpretentious brook.

THE WALKHAM.

The WALKHAM flows into the Tavy a short distance from Denham Bridge, and it is well stored with Trout, some of which run to 3, and even 7 lbs. It abounds in deep pools and stickles, but being very woody, it is rather difficult to fish. Those, however, who are hardy enough to undertake the task, are well repaid for their trouble by the sport they get, if they do not basket every Trout they hook. As the banks are high, and the deep pools overhung, heavy fish are not so easily landed. Fishermen are therefore not unfrequently obliged to content themselves with the excitement of having played with a fine Trout for a considerable time and lost him, with a hope, perhaps, of being more fortunate the next time they make his acquaintance.

The Horrabridge Station is convenient for this river, and the fisherman has the choice of going up or down the stream. It is also included in the Tamar and Plym Fishery District.

THE NOTTAR AND INNEY.

On the west side of the Tamar are the NOTTAR and the INNEY, both flowing into it, also included in the Tamar and Plym Fishery District. The Nottar takes its rise in Withalbrook Marsh, a little west of the high hills of Kilmar, Hawks Tor, &c., and makes a rapid descent from these moorlands opposite Trebartha Hall, where it is joined by another stream, and thence flows on through the parishes of Northill, Linkinghorne, St. Ives, Callington, Pillaton, and St. Stephens, and empties itself into that part of the Tamar known as St. Germans Lake, near the Barton of Erth. A few years since the lower part of this river afforded some sport, but now its waters are polluted by the streams running into it from the Redmoor and other mines

near Callington, a little above the bridge on the turnpike road leading from that town to Liskeard; this would be the point for a stranger to start from, and fish up the river. He will find it rather wooded for some distance, and must allow the beauty of the scenery to compensate for entanglements and the loss of a few flies.

The Inney is rather small for fly-fishing until it reaches Lewannick, and is here preserved by Edward Archer, Esq., of Trelaske, about as far as the bridge which crosses the turnpike road leading from Liskeard to Launceston, where it becomes a good Trout stream, running from thence into the Tamar at Carthamartha. The fair sportsman always meets with a favourable response for a week's fishing from its courteous proprietor.

In order to fish either of these rivers, head-quarters had better be taken up at Golding's Hotel, in Callington, and the Inney can be commenced at the bridge crossing the turnpike road from Callington to Launceston, and fished up; this bridge is about four miles from Callington, and the Nottar about two miles. The Trout is the only fish in either river, and after rain some fair-sized ones may be taken with the Red Palmer and light blue with silver twist, black flies with a little gold twist, dun flies, and the large white moth in the evening twilight. On the Nottar, the light-blue hackle and yellow silk body is occasionally a good fly. A southerly wind and a cloudy sky will be found a favourable condition of weather for these rivers, especially after a few hours' rain; or, in fact, in rain, if it be warm. The Nottar flows somewhat from north-west to south-east; the Inney from west to east, but very winding in its course. The pedestrian may approach the Nottar just under Stoketon, which is about two miles from the Saltash Station.

THE ERME.

The Erme is situated about eleven miles to the east of Plymouth; the Totnes road crosses it at Ermington, about two miles from its mouth.

About two miles from Ermington is situated the picturesque town of Ivybridge, on the Exeter road, well known to sportsmen for its excellent inn, from the window of which an expert hand would cast a fly into the stream. The South Devon Railway has a station about half a mile from the town, at which the fisherman may be set down as early as half-past seven in the morning, with a long day before him. The best fishing, though the most difficult, on account of the wood, is from Ivybridge up to Harford Bridge, a distance of two and a half miles. From Harford Bridge to the source of the river the fishing is open; and should the sportsman wish to proceed at once to this spot, he will find good stabling at a cottage near the Bridge. Should he wish to pass a few days on the banks of the river, he will find excellent accommodation at Broomhill, a farm in the occupation of Mr. Smith, situated close to the river, between Ivybridge and Harford, a mile and a half from the former, and half a mile from the latter. Here, if he be fond of hunting and shooting, he will find himself on the spot where Meets generally take place. The Trout in the stream are numerous, and in the pools and falls amongst the rocks at Ivybridge the writer has frequently taken some heavy fish. A few Salmon and Peel, in spite of the poaching and polluting refuse from the paper mills, occasionally find their way into the upper waters. The portion of the Erme below Ivybridge is rather bare of Trout, but the upper portions are better worth fishing, and have the advantage of being free to the fisherman.

THE AVON.

The Avon, 18 miles east of Plymouth, is a good stream, well stored with Trout, and rather open; it rises on Dartmoor, and flows southward by Brent, Newhouse, Loddiswell, and Aveton Gifford, at any of which places lodgings for man and beast are obtainable. The South Devon Railway has a Station at Brent, a healthy, thriving village, which is fast becoming a favourite resort of those who love to enjoy fresh air and fishing. The river may likewise be approached from the Kingsbridge Road Station, which is about a mile distant from it on the South Devon line. Here, as well as at the Carew Arms, the sportsman will find excellent accommodation. The fishing on the river is free from the source to Beckham Bridge, about four miles below Newhouse; but the remaining portion to the mouth of the river is at present, in some parts, under a double conservancy; namely, the Avon Fishery Association, who grant season and day fishing tickets, and the Avon Fishery Board of Conservators, who grant salmon licenses.

This river has for the last few years given marked evidences of what ought to be done by a stringent application of the Salmon Fisheries Act. Certain nefarious fishing practices having been abolished, fresh-run Salmon have occasionally made their appearance during the spring season, and there is every reason to believe that the Avon would, if properly protected from poachers, receive the visits of early as well as late fish. There is still, however, much poaching to be looked after, and very much more to be done towards the improvement of the condition of its weirs.

THE DART.

The Dart rises on Dartmoor, and flows southward through Holne Chase and the town of Buckfastleigh to Totnes, where it meets the tide, which flows up from Dartmouth through an estuary justly termed, from its picturesque beauty, the English Rhine. This river is under the strict surveillance of a Board of Conservators, Anthony Pike, Esq., Berry, Totnes, being the secretary. These gentlemen have used strenuous endeavours to raise this river to the position which it gives evidences that it ought to hold, namely, that of being one of the best, if not the best, Salmon-stream in South Devon. The repeated accidents which some years since befel the weir at Totnes afforded opportunities for numbers of Salmon, which would have otherwise been interrupted, to find their way into the moorland tributaries of the stream, and large Salmon were taken as far up as Princetown and Twobridges. Whatever be the conflicting opinions about the change of condition in rivers from late to early seasons, it is very evident, that whereas the visits of spring Salmon to the Dart were like those of angels, few and far between, they are now making their appearance in large numbers as early as March and April. Unfortunately, however, there is seldom water enough in the river to enable many fish to surmount the fish-pass at the iniquitous Totnes Weir, and we therefore hear of tons of Salmon being caught below it in the nets. The autumn fish continue running up, when they have a chance, as late as November and December; but the mining waters keep them in a sickly condition until they can manage to get up beyond their polluting influences. Something might certainly be done to improve this state of things, and it only wants a little speculative energy amongst the conservators themselves to make the Dart not only a splendid Salmon stream, but a highly remunerative one in a pecuniary point of view.

If the lease of its Salmon fishery at Totnes will remunerate a private individual who has no interest in replenishing the stock in the upper waters, surely it would pay a company of conservators (who might work the fishery through their own agents) equally well. The increase in the value of the fishing would also more than double the value of a season ticket, and the Dart would then be second to no river in Devon.

The upper portion of the Dart, fed by numerous little streams on Dartmoor, affords excellent Trout fishing, and in order to obtain it the best plan is to take up lodgings at Princetown or Twobridges, on the moor; at which places the sportsman will be within convenient distance of the sources and tributaries of several rivers. Among them are the Cowsick, the Walkham, Cherrybrook, Blackbrook, East and West Dart, Walla-brook, &c.

Tickets and licenses for the Dart by the season, month, week, or day, can be obtained at Hearder and Son's, agents to the conservators, 195, Union-street, Plymouth, or from the Secretary, at Totnes.

THE TEIGN.

The Teign, at Newton Abbot, has some Trout and Salmon fishing, but its water is much impaired by mines. Efforts, however, are being made by the Teign Fishery Board to ameliorate its condition, but as yet with little effect. Formerly it contained an abundance of Salmon, but they have gradually disappeared before the various pollutions which now contaminate it, and it will require great determination and stringent legislation to work any considerable change in it.

The following table of Soltau's flies, suitable for any of the rivers in the vicinity of Plymouth, will be found

of some considerable use to the sportsman, as it will show at a glance the particular flies suited for each month. Those marked thus $\frac{+}{+}$ are adapted for windy weather; marked thus * are Moor flies.

FEB.	No.	1, 2, 3,$\frac{+}{+}$ 4, 9,* 10, 12*
MAR.	,,	1, 2, 3,$\frac{+}{+}$ 4, 6,$\frac{+}{+}$ 9,* 10, 12*
APRIL	,,	1, 2, 3,$\frac{+}{+}$ 4, 5,* 6,$\frac{+}{+}$ 7, 9,* 10, 12
MAY	,,	1, 3,$\frac{+}{+}$ 5,* 6,$\frac{+}{+}$ 7, 8, 9,* 10, 12,* 13, 14
JUNE	,,	1, 3,$\frac{+}{+}$ 5,* 6,$\frac{+}{+}$ 7, 8, 9,* 10, 12,* 13, 14, 15, 16, 17
JULY	,,	1, 3,$\frac{+}{+}$ 5,* 6,$\frac{+}{+}$ 7, 8, 9,* 10, 12,* 13, 15, 16, 17, 18
AUGUST	,,	1, 3,$\frac{+}{+}$ 5,* 6,$\frac{+}{+}$ 7, 9,* 10, 11, 12,* 13, 16, 17, 18
SEPT.	,,	1, 3,$\frac{+}{+}$ 5,* 6,$\frac{+}{+}$ 9,* 10, 11, 12,* 18*
OCT.	,,	1, 3,$\frac{+}{+}$ 5,* 6,$\frac{+}{+}$ 9,* 10, 11, 12,* 18*

The flies here designated by numbers are flies familiar to most fishermen, and are known as the Cock-a-bondhu, Silver Grey, Blue Upright, Black Gnat, Coachman, Alder, Red Spinner, March Brown, &c., &c.; but even as those flies vary in slight particulars in the modes of dressing in the hands of different individuals, Mr. Soltau, who has had great experience in the fishing of the Devonshire rivers, preferred numbering them to naming them, in order to ensure perfect uniformity in the flies made from his patterns. HEARDER AND SON always keep the original set given to them by Mr. Soltau, and as they are on terms of intimacy with that gentleman, the most perfect accuracy may be depended upon in all that they supply.

In addition to Mr. Soltau's patterns, HEARDER AND SON have always an extensive assortment of every species of fly, suited for any part of the world.

As a general rule, worm fishing is prohibited in the Devonshire rivers, but dapping with the blowing-fly, fern-web, grasshopper, or any of the admirable imita-

tions always kept in stock at HEARDER's establishment, is quite admissible.

Trolling and fishing in the hands of the expert fisherman are about the best and surest modes of capturing the largest fish, whether Trout, Salmon, or any of the migratory species.

HEARDER AND SON, in addition to their celebrated Plano-Convex Minnow, which has been honoured amongst others of their baits with nine prize medals from English and Continental Exhibitions, including the International of 1874, have always in stock an abundant assortment of every description of spinning bait.

PIKE FISHING.

The only place in Devonshire worth noticing as a spot where genuine Pike fishing can be obtained is SLAPTON LEA, near the village of Torcross, on the sea coast, about half way between Kingsbridge and Dartmouth, from either of which towns it is distant about eight miles. It is a fine piece of brackish water, about two miles long, and, in some parts, half a mile wide, enclosed from the sea by a natural sandbank, as if expressly set apart for this very purpose. It is abundantly stocked with Pike, Roach, Rudd, and Perch, all of which afford good sport. The Pike run from 6 to 20 lbs., but HEARDER AND SON have in their collection of preserved fish one that weighed 25 lbs., several of a similar size and larger that have been taken on the Lea. As the water shoals very gradually, there is no fishing with a rod and line from the bank; boats are therefore always in requisition, and from these the fisherman may spin or troll *ad libitum*. Should he not care to be troubled with live bait, he will find the Plano-Convex Minnow (Nos. 4 to 6, page 44) his best

friends. They have done marvellous execution amongst the pike of late years; whilst the Perch are ravenous after Nos. 1 and 2.

The fishing time on the Lea commences on the 1st April, and terminates on the 31st October, the intervening period being reserved by Sir Lydstone Newman, the proprietor, for the protection of the wild fowl.

Mr. Vickery, of the Sands Hotel, to whom the fishing is leased, not only caters most substantially for the comfort of his visitors, but supplies fishermen with the necessary tickets for enjoying their sports on the Lea.

A boat and a man can be obtained for 5s. a day for one fisherman, or 7s. for two. There is some capital sea fishing also to be had here, and boatmen will be found always ready to take parties out.

The coach which runs at present between Dartmouth and Kingsbridge stops at the Sands Hotel for refreshments. It takes on from the morning train at Dartmouth, and waits for the arrival of the express passengers from the South Devon Train at Kingsbridge at 5 p.m. every day. There is also a coach which leaves Kingsbridge for Plymouth at 8 a.m., and returns from Plymouth at 4 p.m. every day during the summer months, but in the winter only on Tuesdays, Thursdays, and Saturdays.

PART SECOND.

SEA FISHING.

In addition to the Salmon and Trout fishing of the rivers in the vicinity of Plymouth, a more substantial, and perhaps not less pleasant recreation is to be found

in the sea which washes its shores. Fish, in great variety and abundance, are to be met with in their various seasons; amongst these may be numbered mackerel, pollack, bass, pouting, chad, mullet, whiting, conger, and cod, and as these constitute the great bulk of the fish which abound on all the shores of the United Kingdom, the following general remarks on Sea Fishing will be equally applicable wherever circumstances happen to correspond. Several peculiarities will have special notices, and as Plymouth may be looked upon as the type of a good fishing station, affording as it does opportunities for the capture of almost every kind of sea and harbour fish, the reader will be amply informed as to the spots suitable for each kind of fishing, and the tackle best adapted for the purpose.

The class of tackle to be used and the modes of fishing to be adopted may be considered under two heads, namely: Surface Fishing, and Deep Sea or Ground Fishing; and as the line is the main element in both cases, it may be as well to consider its character at once.

LINES, AND THEIR ESSENTIAL QUALITIES.

A Fishing Line should be strong; this quality enables it to possess another, viz., that it should be fine, so as to pass easily through the water without friction. A third quality, and an indispensable one, is that it should be perfectly free from the intolerable nuisance of kinking or curling, a defect which mainly arises from improper manufacture

Hard wiry lines possess this objectionable quality to such an extent that it is impossible to throw off a dozen turns from a reel in one direction without causing it to run into kinks. Hearder and Son's lines are all

manufactured by a process essentially their own, and are beautifully pliable, and so perfectly free from the defect of kinking that a new line can be used at once without having to pass through the ordeal of wetting, stretching, towing astern for hours to take the twist out, &c.

Two-strand lines have been recommended as free from this evil; but as the defect is not in principle, but in the mode of manufacture, a three-strand line, properly made, is as little liable to kink as a two-strand one, whilst, bulk for bulk, it is stronger.

Horsehair Lines should be free from knots, as these hold much water and catch up floating weed in towing, and do not run through the hand or over the edge of the boat freely; they are very well in the hands of those who like to twist their own lines, and have not access to the machinery necessary for spinning them in a continuous length. The chief advantages of horsehair lines are—first, durability; and second, linear elasticity. When a sudden strain is put on a horsehair line, it yields considerably in its length, and acts as a sort of elastic spring, thereby preventing the sudden jerk which, when a boat is going fast, not unfrequently carries away a valuable snood when the bait is suddenly seized by a heavy fish. Horsehair lines are considerably more expensive in the first outlay, though this is compensated for in a great measure by avoiding the loss of valuable appendages.

Gut Lines should have no more twist than just enough to keep the strands from lying open. It is a great mistake to twist gut tightly for the sake of appearance.

Platted Lines are superior to twisted lines, as they cannot kink; hence platted flax, platted silk, and platted gut, are in great repute.

By Hearder and Son's process, however, they are enabled to manufacture a superfine flax twisted line

which is admirably suited for rod fishing; it is extremely strong, beautifully even, runs freely through the rings of the rod, is not liable to kink, and is made in lengths from 20 to 120 yards. It is much prized for Bass fishing, and many use it even for Trout and Salmon.

Gimp consists of a core of silk fibres or strands served round closely with wire: its value as a snood is not sufficiently appreciated. It combines strength and flexibility with a certain amount of rigidity, which prevents it from curling around and entangling itself with the main line, as is too often the case with the ordinary flax sid or snood. Some crack fishermen use a line entirely of gimp, and consider it the *ne plus ultra* of a fishing line, as its weight in proportion to its bulk supersedes to a great extent the necessity of leads. Cotton is sometimes substituted for silk in the manufacture of gimp, to reduce the price; but this is a cheat which the fisherman soon discovers to his mortification, by the loss of all the supplemented gear. Hearder and Son manufacture a gimp of very large size, having a flax core of amazing strength, especially adapted for conger fishing.

The finer sorts of gimp form excellent snoods for whiting.

The various appendages of leads, snoods, and baits will be considered in connection with the uses to which they are applied.

SURFACE FISHING.

This term is applied in contradistinction to Ground Fishing, and is not strictly confined to the surface, but includes the fishing at a small depth below the surface.

The fish usually taken on the surface are mackerel, pollack (sometimes called lythe, billet, and coal fish), gurnards, bass, chad, and mullet; and as some are taken

best by one plan and some by another, the different processes will be here described.

WHIFFING FOR MACKEREL, POLLACK, ETC.

The term WHIFFING is applied to the act of towing a line with its fishing appendages astern of a rowing or small sailing boat. The same process may be employed astern of a yacht, but then the term Reeling or Railing is used, and indicates the use of stronger lines and gear, as well as heavier leads, on account of the greater speed.

The line used for whiffing may be of fine cord or hair. The caprice of the fisherman is the rule in this case: one contents himself with a fine, strong, twisted flax line. Another chooses platted flax; this is better, but much dearer. A third will have nothing but hair—still dearer, but excellent on account of the quality of elasticity, which saves many a good fish, or prevents the loss of a valuable trace, which might have snapped under the sudden bringing up of an unyielding cord line. A fourth patronises a platted waterproofed silk line; fine, strong, about as expensive as hair, but rather too small to handle when the fingers are cold. A fifth goes in for gimp, regardless of 3d. or 4d. per yard, and unquestionably surpasses the whole.

The length of the line should be 20 to 25 yards, and to it is attached a sinker, varying in weight from half an ounce to four or five ounces according to the depth at which it is desirable to fish. The boat-shaped sinker is the best form to prevent the twisting which may take place in a line under strain from being carried forward to the trace and flight of hooks, which might otherwise be caused to curl up and foul with each other. If round sinkers tapered at both ends be used, it is best to insert a swivel, either between the line and sinker or between the sinker and the trace, which will thus obviate the

objection and prevent the mischief. HEARDER'S new sensitive sinker is a double taper lead, having a loose wire axis, passing through the centre ; at the extremity of this the line and snood are respectively attached, the loose axis permits the slightest tug of a fish to be felt at once through the lead. To the sinker is usually attached a fine snooding, with the various contrivances for decoying and capturing the finny victims. The following are the principal modes of fitting the trace, as the snooding and its appurtenances are termed : The first and simplest mode is to connect with the sinker a length of four or five yards of fine flax snooding or copper wire, to the extreme end of which a hook, snooded with gut, is attached, which may be baited with the mud-worm. In lieu of the hook, a white or coloured pollack fly, or, still better, the silver spinner (*page* 28) may be used. These latter require no bait. Secondly, in lieu of the copper wire or flax snooding, a snood of three or four yards of gimp may be employed, which, although more expensive, is infinitely better, as it keeps clear of the line and never kinks. To render the line still more complete, an extra trace of twisted gut, or very strong single salmon gut, from one to two yards in length, should be attached, and upon this gut-trace should be fastened, at every knot, a white or coloured pollack fly, the trace being terminated by a silver spinner. These flies, as they pass through the water, look like a shoal of small fish.

A still closer resemblance to a fish is the indiarubber sand-eel, made of different colours, or the white sole skin bait, and these may be advantageously substituted for the flies just described, especially where large pollack are to be met with.

With a line of this kind, having six baits and a spinner, it is no uncommon thing to take in a fish on every hook half a dozen times in succession. Some even go to the extent of lengthening their gut-trace so as to

take on twenty or thirty flies, and, when fish are plenty, a score of fish may be sometimes thus taken at a single haul.

Round the coast of Ireland and the west shores of Cornwall large pollack of ten and fifteen pounds weight are frequently met with. These require extra strong gut tackle, and larger flies and sand-eels than those usually employed in harbours. They also take the larger size spinners, Nos. 3 and 4, to be presently described, as well as the Plano-Convex Minnow, No. 3, *page* 29.

The coal fish and billet met with on the Yorkshire and Scottish coast, being fish of the same class, require similar tackle. These lines in great variety are described, with their prices, at *page* 14. The arrangement best for mackerel is a flight of white flies terminated by a single silver spinner, but pollack take the red and white flies, the sand eel and the sole skin.

MACKEREL AND POLLACK RAILING.

The lines for this purpose, as before incidentally noticed, are fitted in all respects after the style first described, the only difference being, that the lines must be stronger, and the leads will be required to weigh from one to two, or perhaps occasionally three pounds.

There is much difference of opinion as to the form of lead to be used in mackerel railing. Some prefer the boat-shaped lead, on account of its steadiness: others object to the very same lead because they say it shears from side to side, and these latter prefer the plummet lead. Others again object to the plummet lead because they maintain that it jumps, and gives false signals. In the midst of such conflicting evidence it is difficult to decide between the disputants, and HEARDER AND SON therefore construct all kinds of leads to suit all tastes. There is, however, one point upon which all are agreed, namely, that the weight of the lead, when intervening

between the line and snood, often prevents the fisherman from feeling the delicate bite of a mackerel or other fish especially when making much way through the water. To remedy this defect, as well as other objections in the action of a heavy lead, HEARDER AND SON have introduced a new form of railing lead, to which they have given the name of the Sensitive Sinker, and which old and experienced fishermen pronounce as the *ne plus ultra* of a whiffing and railing lead. (*See page* 18. It is of an elongated form, taper at both ends, and has a hole passing through the axis; through this hole a brass wire passes loosely, and is formed into an eye at each end for the purpose of attachment to the line and snood. The wire is sufficiently long to allow of its slipping longitudinally a short distance through the sinker. The advantages thus derived are the following: 1st. the sensation of a bite at the further end of a snood is much more easily felt on the main line through the medium of the loose wire, instead of, as before, being interrupted by the inertia of the heavy lead; and, secondly, the double taper form enables the sinker to slip through the water more easily than any other. The tendency of the line thus free to transmit its motions through the loose wire to the snood below, and thereby cause it occasionally to twist, is counteracted by the insertion of a swivel between the lead and the snood.

It is desirable here to describe a plan thought by some to be absolutely necessary, but which most probably had its origin in an attempt to obviate a defect in a badly manufactured line, namely, that of twisting when subjected to a strain. It is termed the Railing Chopstick, or Boom. It is simply a flat piece of wood about three or four inches long, $\frac{1}{2}$ to $\frac{5}{8}$ of an inch wide at one end, about $\frac{3}{8}$ at the other. The wide end has a hole in it large enough to allow it to be slung on the line above the sinker, and the small end is notched, for the purpose of having the snood with its appendages attached to it.

The snood is thus free of the sinker, and should the line have any tendency to twist, it can do so, and cause the lead, which is plummet-shaped, to revolve without carrying round the snood with it, and perhaps entangling the flies with which it is furnished. As, however, in spite of this provision, the boom often gets carried round with the lead, HEARDER AND SON have invented a revolving boom (*page* 18), which turns on a brass tube with very little friction. The tube is slung on the line, and being smooth, does not chafe it, whilst it keeps the boom or outrigger standing out so as to carry the snood well off the line and sinker. It is considered by those who use it to be a great improvement on the slip of wood just described.

As the term Chopstick is more properly applied to a contrivance to be hereafter described in connection with ground fishing, and which differs from the railing chopstick in having two arms instead of one, it would prevent mistakes in ordering sea tackle if the term Revolving Boom were used in relation to whiffing or railing lines, as the chopstick proper is totally unfit for this purpose.

In addition to mackerel and pollack, gurnards and bass are caught by the process of whiffing. Gurnards in particular afford excellent sport, as they take the spinner greedily, and bass in some localities also take the spinner. As, however, the habits of the bass are peculiar, they will receive separate and special notice.

It is frequently the practice in whiffing to employ three or four lines, but as these would be apt to get foul of each other without proper precautions, the hindmost lines must be the longest and have the lightest leads. The next two, namely, one on either side, must be shorter and have heavier leads ; and if it be desirable to employ two more, the lines must be still shorter and the leads heavier.

The TELL-TALE, or Cane outrigger (*page* 39), is very

useful either for whilling or drift lines, to be presently described. It consists of a piece of stout cane three or four feet long, fastened into a small block of ash, elm, or some tough wood. In this block a notch is cut large enough to fit down over the gunwale of the boat and take a wedge to tighten it, and in such a direction as to allow the cane to point straight away from the side. The outer end of the cane is notched so as to allow the end of the line to be slipped into it (and is sometimes furnished with a bell so as to attract the notice of the fisherman), and the inner end of the cane, which passes about two or three inches through the block, is notched so as to allow the line to pass through it also, the reel with the remainder of the line hanging in the boat. The spreader, or tell-tale, shows by its bending when a fish is hooked, whilst its elasticity prevents the fracture of the fine gear. The notches enable the fisherman to cast the line adrift quickly when he wishes to haul in his fish or pay out more line, as the case may be. A piece of cane simply stuck upright in any of the holes of the gunwale is also frequently used as a tell-tale when the fisherman has more than one line to attend to. Fishing rods are also used for the same purpose when it is desirable to keep the lines clear of the boat. *(See boat rods, page 24.)*

MACKEREL MIGRATIONS.

Mackerel first make their appearance in the English Channel about February. In March and the following three months the Mackerel drift nets reap an abundant harvest, and as the shoals proceed up Channel the Mackerel fishing gradually develops itself along the coast. In July the shoals begin to break up and enter the southern harbours, affording fine surface sport, a well-appointed whilling line often taking four to six at a haul, no other bait being required than a strong gut-

trace furnished with six or eight flies, or sole skin baits, and terminated by HEARDER's spinner. Towards the end of July, and throughout August and September, on the south coast the fish leave the surface and go to the bottom, where they are taken two or three at a time with chopsticks, legers, and paternosters, baited with a mud-worm. Whilst the remnants of the Channel shoals are thus behaving, other shoals find their way along the coasts of Ireland, Wales, and Scotland, and also along the eastern shores of England, where throughout August and September they are caught in immense quantities, not only with whiffing lines from a boat, but with rod lines and the spinner and flies from the rocks and headlands; eight or ten score often fall to the lot of a single whiffing line.

HEARDER'S SILVER SPINNER.

Before dismissing the subject of whiffing, a few remarks are necessary on the more extensive application of the Silver Spinner. The success which followed the introduction of this sea bait by the writer has increased with its use, until its utility is at present so universally recognized that the sale amounts to tens of thousands annually. This fact alone is sufficient to establish its value. Not only is it useful for mackerel, but other and larger fish are also attracted and captured by it; hence their sizes have been increased to meet requirements. Even whiting, plaice, and cod, which are bottom fish, often take it freely when used at the end of a chopstick or a boat-shaped rig. In the neighbourhood of rocky headlands large pollock of 10 or 15 lbs. are caught with it, along the Scottish Coast, in the Shetland Islands, amongst the Hebrides, and on the coast of Norway, Codling and large Cod are taken with it at the bottom, whilst in the ocean extra sizes take the Dolphin, Albacore, Bonita, &c. At Gibraltar, Rangers, Bass, and other fish

are freely taken with it by spinning with a rod from the rocks. In the Mediterranean it takes several of the surface fish, and at the Cape of Good Hope it takes the Snook, Cape Salmon, and fish of that class. A list of these spinners will be found at *page* 28.

The CHAD, or Young Bream, visit our coasts in July, August, and September, and are amongst those fish caught at the surface or just below. They are often caught in whiffing; hence their notice in this place: but the best mode of fishing for chad is to employ a twisted gut trace, with from four or six hooks, on short twisted gut strung on at the several knots, and baited with mud-worms, mussel, shrimp, or squid. This gut-trace can be used as a paternoster, with a plummet lead at the bottom, or it may be attached to a gimp collar of two or three yards in length, and this again to a lead, precisely in the mode adopted for the whiffing line (*page* 14). It is not, however, to be used in whiffling, but from a stationary boat.

As the chad swims at various depths, their whereabouts being ascertained, the necessary length of line above the lead is adjusted accordingly.

When chad are plenty, a couple of lines may sometimes take from six to twenty dozen; they are very bold, and do not require particularly fine tackle. The chop-stick used for pouting (*page* 17) is also an excellent contrivance for chad, and the snoods at the ends may be furnished each with two hooks, one about a foot below the other.

SURFACE FISHING AT ANCHOR.

THE DRIFT LINE, ROD AND FLOAT LINES, &c.—The foregoing remarks have principally had reference to fishing in a boat in motion, but as this is rather laborious work when the fisherman is the only one to do the pulling as well as the fishing, it is found very convenient

occasionally to moor the boat and adopt another mode of proceeding.

The Drift Line here comes into requisition, and artificial baits are to a great extent discarded. Should the fisherman be unprovided with any other than his whiffing lines, he may use them, simply removing his flies and substituting in their place hooks for baiting. The run of tide carries his line away from the boat, and the weight of the lead must be adjusted to meet circumstances. The drift line *(page 15)*, however, is a more convenient contrivance. It is a flax or hair line, the latter being preferable, having a number of pipe leads slung upon it at intervals of about two fathoms. These leads are fixed with little wooden pegs : their use is to determine the depth at which the bait shall be kept. If the tide be not strong, two or three leads can be let out ; but if the current be swift, then half-a-dozen or more may be paid out, until the weight is sufficient to keep the bait at the required depth. In any case the drift line should be terminated by a gimp snood and a yard or two of strong gut, with a hook for bait. These lines permit the bait to be carried to a considerable distance from the boat, and it will be easily seen that by employing lines lightly or heavily leaded, four lines can be readily used at a time if those with the lightest leads are used in the stern. The tell-tale, or cane spreader, which projects three feet on each side of the boat *(page 39)*, affords an opportunity of employing an extra pair of lines.

Rod Lines with floats *(page 13)* may also be advantageously employed in fishing at anchor, as, by varying the position of the rods, length of line, &c., greater number can be used from a single boat without interfering with each other.

Some employ a line with rather a heavy sinker, having a long snood of gimp and gut below it. The sinker is let down the required depth, and the tide carries the snood and bait away from it.

By this kind of Stationary fishing, pollack, mackerel, chad, and occasionally bass and dories, are taken; and the best baits are the living sand-eel, if it can be procured, the mud-worm, mussel, cuttle-fish, or squid, a lask from a mackerel's tail, shrimps, or even small crabs. Any of the spinners will often take pollack, bass, and mackerel, if the tide should flow fast enough to make them spin well, especially if the line be kept moving by pulling it in and letting it out a yard or two.

FLY FISHING AND SPINNING FOR BASS AND POLLACK FROM A BOAT.

There is still another mode of surface fishing to be described, and not the least interesting, on account of its alliance to the noble sport of salmon fishing, which it closely resembles as well in its manipulation as in its results. The bass is in the sea almost what the salmon is in the river. He takes the white or green fly and the sole skin bait as well as the different forms of spinners, and when hooked by any one of them shows game by fighting hard, leaping out of the water and sheering right and left in true salmonic style. As he ranges frequently from three to fifteen pounds in weight, he becomes a fish worth notice, especially when, as is sometimes the case, as many as 70 or 80 have been taken in a morning before breakfast with a single rod and one of the writer's indiarubber sand-eels (*page* 30).

Before describing the modes of taking the bass, it may be as well to consider his habits and whereabouts.

He is, then, always found in estuaries, making his way in with the flood tide, sporting chiefly near the surface of the water, though he is not unfrequently found at the bottom grovelling for ground-bait; frequently he feeds by night; and dozens are occasionally caught after dark from the Pier at Millbay, Plymouth. Shoals of the smaller bass, from half a pound to three

pounds in weight, may be seen as the tide runs up over the sandy flats scudding along with their backs out of the water, eager to gobble up the little creatures that unsuspectingly emerge from their sandy retreats to receive their accustomed rations from the flowing tide.

Abundant though the bass is, and his periodical visits always to be depended upon, yet the mode of capturing him appears to be only now gradually unfolding itself. Hitherto it has been the practice to whiff for him after the manner before described for mackerel and pollack, using the same kind of gear, namely, flies and spinner (*page* 15), and occasionally some fine fish are caught in this way.

More recently the writer's indiarubber spinning sand-eel has been welcomed as a valuable addition to the list of artificial baits, but of these more hereafter.

If the fisherman be bent on whiffing for bass, he must attend to the following instructions. Chose a day when there is a smart ripple on the water, and do not whiff in the same direction with the tide, for bass are shy fellows, and do not care to follow in the wake of a boat. If you pull against the tide, you meet the fish and disperse them all, and your bait astern receives no visit. If you pull with the tide, and fast enough to keep your line trailing astern, even then you may frighten the fish, which are very likely to be keeping as far ahead of the tide as you are. Whiff, then, across the current with a long fine line, neatly supplemented with but few appendages. A spinner or jim crow bait and a sand-eel or sole skin bait, or a couple of flies, but not more; or perhaps you might even do better by terminating your line with a spinner only, or with a single fly, or sand-eel, or, if you can get it, with a live sand-eel. By this means, as your bait passes across the noses of a variety of fish, it is a chance if one or the other does not feel tempted occasionally to take it. When hooked, deal with him gently, not hurriedly, for he is strong and

wayward; if he will have line, let him have it, but not too easily; and when at last you get him alongside, have your gaff or landing net ready, or his last desperate effort to escape may be successful if you trust to a gut snood. At best, however, this kind of sport falls very far short of what is now recognised as bass fishing *par excellence*, namely, fishing with a rod and line from a stationary boat or rocky headland, either with a sand-eel or plano-convex minnow, No. 3. The salmon fisher requires no instruction for this class of sport; already *au fait* with the minnow and fly on the river or lake, he is at home with their representatives on the sea, but the uninitiated may require a few hints, and for him the following remarks are penned. First, then, let him provide himself with a rod not less than 14, but better 16 or 18 feet in length, tolerably stiff, but pliant enough to make a cast with a sand-eel, fly, or spinner, at the end of 30 or 40 yards of line. The rod may be of hickory or cane (*page* 25), the latter combining lightness with strength. It should be furnished with upright rings, so as to allow the line to work freely. A general rod, such as is described in page 41, is a convenient rod, since, in addition to the more slender top for casting the fly, it is furnished with stiffer tops for fishing from piers and rocks with a float line. The next essential is a large, strong winch, capable of holding 80 to 150 yards of fine but strong line. (See winches *p.* 25.) This winch is fixed in the ordinary way by a sliding ring to the butt of the rod.

Next comes the Line. Some prefer the standard salmon line of eight-plat silk (*page* 11), prepared with waterproofing varnish, or the less expensive eight-plat flax line (*page* 11), which may be waterproofed or not.

If economy be the order of the day, HEARDER's superfine flax line (*page* 10) combines this quality with efficiency. It is extremely strong, very fine, and has no tendency to kink, and is therefore free from all the dis-

agreeable objections, so common to the much vaunted cotton lines, and may be had in lengths from 30 to 120 yards at 8d. per score plain, or 1s. waterproofed.

The line is to be supplemented by a fine but strong trace of twisted, or, still better, platted gut (*page* 11). This trace should be about three yards in length, and is better for having a swivel inserted about a yard from the end.

To this trace is attached the fly, plano-convex minnow, or indiarubber sand-eel, as the case may be. Lines with these appendages are to be found at page 13.

Bass seem to prefer different baits in different localities; in some places they take the fly, especially the green one, with silver body, from its close resemblance to the brit; in a greater number of situations they take the sand-eel, but the plano-convex minnow, No. 3, appears from all accounts to surpass the whole as a universal killer. Thus equipped, the fisherman chooses a day when there is breeze enough to raise a white crest upon the wave, and anchors his boat in the tideway, just in the course bass are known to take. Here he casts his line right and left as far as he can well throw it, drawing the bait towards him across the stream, occasionally using a small pipe lead just above the swivel, to sink the bait a few inches below the surface. By this process the writer is credibly informed by experienced bass fishers that ten times more bass can be taken than by any other.

When pollack alone are sought for, the stiff breeze is not so much a *sine quâ non* as when the game is bass, and the rocks may be approached more closely.

SPINNING AND FLY FISHING FOR BASS, &c., FROM ROCKS AND JETTIES.

Comparatively few persons appear to be aware of the excellent sport to be obtained by spinning and fly fish-

ing from the bold rocky headlands with which the British Isles abound; but this admirable sport, which has the capital advantage that it can be followed when the sea is much too rough to render boat fishing a pleasant amusement, is rapidly developing itself all around our coasts. All surface fish, such as mackerel, lythe, bass, pollack, billet, &c., are now taken most freely from the rocks with precisely the same tackle and mode of using it as that described in the preceding article. In September mackerel are taken by hundreds round the coast of Ireland, and on many parts of the English coast, and what is not a little surprising, codlings of considerable size are taken at the bottom by the plano-convex minnow, used with rod and line from the rocks. The plan for pursuing this last sport, is to throw out the bait with 30 or 40 yards of line, let it sink to the bottom, and then draw it smartly in. At Filey Brigg, in Yorkshire, and on some parts of the Welsh and Irish coasts, this sport has been most successful.

A word or two on the flies and sand-eels as bass and pollack baits may not be out of place here, as it is a subject much discussed amongst fishermen. The writer has always been of opinion that fish take the feathered hooks not for flies, but for small fish; hence his original fly was made to resemble the fish as nearly as possible by enclosing the hook between a pair of feathers Following up the impression, Hearder and Son contrived their indiarubber sand-eel, with its various modifications, and the accounts which they daily receive of its success warrant them in recommending their drab indiarubber sand-eel as the best bait yet out for bass, second only to the plano-convex minnow. They have also introduced a red sand-eel, which appears to be, from all accounts, an extraordinary killer for large pollack, lythe, billet, and coal-fish, probably from its resemblance to the lug worm. It is extensively

used round the coast of Ireland, as well as round the coasts of England and Scotland. Amongst the various modifications of their compound baits for bass and pollack, they would call attention to the combination of the spinner with the sand-eel or sole skin, namely the jim crow. (*Page* 30.)

This bait can also be used with mud worms, pork rind, or any natural bait as a supplement to the spinner.

THE GREY MULLET.

This is a class of fish either very easy or very difficult to catch with bait. In enclosed portions of estuaries, near bridges, quays, or in extensive docks, they are often caught in great abundance with a rod and line fitted with a gut paternoster furnished with half-a-dozen gut hooks fixed at the knots, size No. 6 to No 8, and having a dip-lead of ¼ oz. to ½ oz. at the bottom (*page* 18). These hooks are baited with small bits of mud or rag-worm. The rod may be of bamboo, ash, or hickory, 10 feet or 14 feet long.

With tackle of this kind at the Great Western Docks, Plymouth, as well in the docks as on the outer wall facing the tide, 6 to 8 dozen of mullet, ranging from ¼ lb to 3 lbs., are sometimes caught in three or four hours. In wide estuaries, however, they run much larger, namely, 3 to 6 and 10 lbs., and here they are difficult to catch. The writer, however, recommends a floating trot across the tide with about 25 hooks, with very short gut snoods (*page* 19), baited with lug-worm, which is about the best bait he has met with for mullet.

An efficient bait is still wanting for mullet, and it is difficult to discover upon what they feed. Mr. Hearder, junr. had an opportunity of watching the proceedings through a bull's-eye in the engine-room of a vessel which was below the surface of the water, and they were observed to come and poke their noses in amongst

the weed growing on the side of the opening as if nibbling it or searching out small marine creatures. They will sometimes take portions of shrimps or bruised crab, or even fragments of earth-worms. Mullet fry from 1½ to 2 inches in length are voraciously devoured by Bass; hence they would form a capital bait for the latter fish. About the best mode for taking mullet is to stretch a seine across an estuary at high-water in a part where the tide leaves the sand and retires into its narrow channel between the flats. The mullet are prevented from going back, and thousands may be thus secured, varying from 6 inches to 2 feet in length. It is necessary, however, to have a good purse to the net, and to strain the warp to which the net is attached tightly across the river at a height of 4 or 5 feet from the surface of the water, as mullet will sometimes leap and pass like a drove of sheep over the edge of the net even at this height.

THE SMELT.

Both the Atherine (or Sand Smelt), which is the only species met with on the south coast of England, and the true smelt (*Osmerus esperlanus*) can be taken with the gear just described as suitable for mullet, with the exception that smaller hooks (No. 9 or 10) should be used.

Smelts (Atherine) are found in the vicinity of mouths of drains or sewers, or fresh-water channels. They also take shelter round the rocks and quays of our harbours, and afford sport to scores of little ragged urchins, whose fit-out consists of a withy, two or three yards of twine, and two or three hooks snooded to hair obtained by an investment of 2d., and yet with this tackle they manage to catch sometimes two or three dozen in two or three hours.

GROUND, OR DEEP-SEA FISHING.

There is a species of ground fishing not so much followed as it might be; viz.,

DAB FISHING.

The Dab is a rich-tasted fish, and well repays the trouble of catching. The ordinary mode of fitting a line for this kind of sport is to use with it a boat-shaped sinker, of a weight sufficient to keep the bottom; to this is attached a snood of gimp or gut of four or five feet in length, terminated by a hook, and having one or more hooks strung at short distances above the end one.

These are baited with mud-worm, mussel, or shrimp, and are allowed to lie upon the ground. If the lead be lifted a very short distance off the ground, the bites are felt more easily. A still better mode, especially where the run of the tide is small, is to use a leger trot (*page* 16). This consists of a flax line of sufficient length to reach the bottom and allow for tidal drift. To the end of the line is attached a small plummet sinker, say about a half-pound. Six inches above the sinker a loop is made in the line, and to this is attached one end of a gut line, termed a leger line or trot; this may vary in length according to the wish of the fisherman, from one yard to six or eight yards, and may be of single or twisted gut, or even of fine flax snooding. Hooks with short gut snoods are strung upon this, at the distance of a foot or so from each other, and a second lead is attached to the further end. To lay this trot, the first lead is lowered into the water, the hooks are baited, and then the line is paid out until the leads reach the bottom in succession, but the boat is at the same time moved, so as to lay the string of hooks between the two leads flat on the ground; the second lead being down, the line is tightened, so as just to feel the lead without

raising it. By this means the tendcrest bite is felt and better sport is ensured, as the fish are sometimes gentle feeders. The hooks may vary from Nos. 3 to 8, depending on the size of the fish likely to be met with.

POUTING, WHITING-POUT OR BLAINS.

This fish delights in deep water with oozy bottom, and is caught in most bays and harbours. As it bites eagerly, the gear need not be particularly fine, though it should be strong, as the fisherman is not unfrequently surprised in pulling up his little prey by a tremendous tug from a heavy fish, which holds on if the snood be strong enough, and allows himself to be brought to the surface. This is a great dory, not always hooked, but more frequently held by the little pouting, which he has seized, sticking in his gullet, and it is only when he is in danger of being lifted out of the water that he will consent to disgorge it. Those who are alive to this little game take care to have the gaff ready to help the depredator into the boat as soon as he is brought near the surface.

To return to the Pouting. The fishing ground being chosen, the boat is moored, and the crew, half-a-dozen in number, the more the merrier, if there be room for them, each provided with a line, commence their operations. A fine flax line of thirty or forty yards, will generally be sufficient for this purpose; to this is attached a lead weight of about a pound, having a wire chopstick 12 or 16 inches long, passing transversely through its centre. To loops at the end of this wire hooks with gut snoods are attached, the length of which should not be sufficient to permit them to become entangled with each other. These hooks are baited with rag-worm, squid, mussel, perriwinkle, limpits, &c., all of which are very good baits. The lead is lowered to the bottom, and then raised, so as to keep the bait just

off the ground. With this arrangement, when fish are plenty, pairs are as often taken as a single fish, and it is no uncommon thing for half-a-dozen lines in a boat to be thus busily occupied for three or four hours at a time.

The best time for pouting is about the slack period near the time of high and low water. When the tide attains much force, heavier leads are required, and to obviate the necessity of providing a set of chopsticks of different weights, HEARDER AND SON have invented two detachable chopsticks which can be used with any ordinary lead, and which permit these leads to be changed in a few seconds (*page* 18).

One of these detachable chopsticks consists of a wire spreader, the central portion of which is coiled loosely upon a brass tube through which the line passes. This is described under Improved Kentish Rig (*page* 38).

THE WHITING.

These fish are caught in great abundance on almost every part of our coast, and at distances from the shore varying from 1 to 20 miles, and at depths from 10 to 30 fathoms always at the bottom. The smaller fish frequently enter harbours, no doubt for shelter from the hake, cod, &c. They bite greedily, and as 300 to 600 may sometimes be caught in a few hours, they afford the fisherman exercise as well as amusement. It is rather fatiguing work to be constantly hauling in 30 or 40 fathoms of line with a 4 or 5lb. sinker at the end of it and therefore HEARDER AND SON have recently invented a galvanized iron winch, which can be screwed on to the gunwale of a boat projecting over the side. By means of a handle, the line is quickly wound upon the winch, and when let down, it runs freely off the winch by the weight of the lead. A hitch of the line over the handle stops it at any depth. The clamp which fixes it upon

the gunwale has a moveable jaw, which adapts it to boats of any thickness, and they also make them with larger clamps to fix on the bulwarks of a yacht, and of dimensions large enough to take a conger line. They will be found to save an immense amount of labour, and are very light in construction. They have designated this reel the Gunwale Winch for deep sea lines (see *page* 28).

LEADS,

AND THE MODES OF FITTING THE DIFFERENT RIGS.

The mode of fitting and using the lines varies in different localities, and is designated "rig." Thus, we have the Kentish rig, the Southampton, Plymouth, Guernsey, and Dartmouth rigs. For minute details of these and others, the reader is referred to the "Sea Fisherman," an elaborate and comprehensive work, by Mr. J. C. Wilcocks; or to a concise and practical treatise on "Sea Fish and how to Catch them," by Mr. W. B. Lord, R.A. A general outline, however, will here be given, which will furnish the fisherman with a mode of fitting and using these contrivances. They divide themselves into two sorts, namely, the chopstick with its modifications, and the boat-shaped rig.

The whiting line should not be less than 30 fathoms, as the tide in some places runs so strongly that a 5 or 6lb. lead will hardly keep the bottom even with two 30-fathom lines bent on end to end. Under ordinary circumstances, however, a 40-fathom line will be sufficient for a boat at anchor with a supply of leads varying from 2 to 5 or 8lbs. If you allow your boat to drift instead of anchoring her, you can then fish with an up and down line and a light sinker, but this involves the necessity of every now and then working up against the tide to regain your favourite spot.

THE SOUTHAMPTON RIG.

This is the chopstick already described under the head of pouting fishing, though of much larger dimensions; for whiting it is usually made by passing a transverse rod of galvanized iron ¼ inch thick through a conical or plummet shape lead sinker of about 2 or 3 lbs. in weight. Short snoods are attached to the eyes at each end of the wire, and are furnished with swivels; to these swivels the hooks and snoods are attached. The snoods may be of fine flax, twisted gut, or, best of all, fine strong gimp, whipped on to hooks having extra long shanks. The snoods must not be long enough to enable the hooks to reach each other and become entangled.

THE DARTMOUTH RIG.

This differs from the Southampton rig in having the chopstick or spreader above the lead. A sling made of cod line a foot or so in length, has an eye worked into each end of it, one to take the lead, and the other the main line. The chopstick or spreader is lashed transversely in the middle of this.

HEARDER'S SHIFTING OR DETACHABLE CHOPSTICK. (*Page* 17.)

This is the same in principle as the Dartmouth rig, but is much simpler, and permits the lead to be changed to suit the tide in a few moments. The galvanized wire spreader is formed into a double eye, like the figure 8 in the centre. The cord sling of the sinker is passed through the lower eye and over the upper one, and the loop of the line is passed through the upper eye and slipped over the sinker. It is figured among other rigs in WILCOCKS' "Sea Fisherman."

THE KENTISH RIG.

This is a contrivance to remedy the inconvenience just alluded to in the Southampton rig, by making one chopstick serve for many sinkers of different weights. The chopstick is made of a piece of wire of the requisite length, the centre portion of which has been coiled two or three times round a half-inch bar of iron, so as to make a sort of tube, through which the sling of the lead passes. The chopstick can thus turn round and slide upon the sling, which is generally made of upper leather. The arms of the chopstick are usually bent down, so as to form a wide fork, thus they hang true with the tide. The snoods are fastened at the ends as before. The leads may thus be detached by slipping the chopstick up over the line, and casting them off at the sling.

HEARDER'S IMPROVED KENTISH RIG, OR DETACHABLE REVOLVING CHOPSTICK.

(*Page* 17.)

The ordinary arrangement of the Kentish rig is open to two objections; being loose and unstable, it is very apt to cause fouling of one or other of the snoods during the descent of the line, and the friction of the wire round the line is, moreover, very apt to chafe it. To prevent this, HEARDER AND SON contrived their anti-friction revolving chopstick (page 17). In this chopstick the middle of the wire-spreader is coiled upon a brass tube loosely enough to turn freely upon it, being kept in its place by flanges at the ends of the tube. The tube itself is made very smooth at the ends, and is large enough to allow the sling of the lead to pass through it easily. The loop of the line is then passed through the sling above the chopstick, and then over the arms and lead of the chopstick itself. The arms can be bent or not to suit the caprice of the fisherman.

The piece of tube on a tight line keeps the chopstick stiff enough to enable it to hook a fish at once when he meddles with the bait, whilst the resistance it affords to any alteration at its horizontal position, acts like a spring, and tempers the pull upon the snood.

THE GUERNSEY RIG.

This arrangement is precisely the revolving slip of wood or boom described under mackerel railing, and the addition of HEARDER'S short revolving boom is equally advantageous here.

THE PLYMOUTH, OR BOAT-SHAPED RIG.

(*Page* 16.)

This differs entirely from any yet described, and by many expert fishermen it is much preferred, especially when the new form of boat-shaped sinker, termed the shearing sinker, is employed, as it affords an opportunity of catching three or four, or even more, whiting at a time. This is a material object when fish are plenty, since the chopstick can never bring up more than two.

Before proceeding further, it may be as well to explain the difference between the old boat-shaped sinker and the new shearing sinker, which is a great improvement. The ordinary boat-shaped sinker consists simply of a lead in the form of a boat, having a wire about five inches in length, terminated by a strong eye cast into each end of it, and standing up so as to form an angle with the end into which it is cast. The line is attached to the eye of one wire, the snood to the other. As the sinker descends it pulls down the line and snood with it, and the friction of these through the water, acting on the two ends, keeps the lead in a somewhat horizontal position, but not quite so, for the main line, affording more resistance than the snood, keeps the

end of the sinker to which it is attached rather inclined upwards. Nevertheless, the position of the lead is such as to keep the line and snood far enough from each other to prevent them from getting entangled. The lead, however, finds its way to the bottom in a direction which would be vertical but for the tide, which carries it astern; thus, when three or four lines are used of equal lengths, and with leads of about equal weights, they lie so nearly together at the bottom, that they frequently get foul with each other, especially if the snoods are rather long. All this is prevented by HEARDER's improved shearing lead, the peculiar construction of which causes it to descend in a direction slanting away from the side of the boat, so that, independently of the direction imparted to it by the force of the tide, the sinker slopes away to the right or left of this vertical plane, according as it is used on the right or left side of the boat: thus, when the sinkers reach the bottom, they are at a very considerable distance from each other. Eyed wires, about five inches in length, are cast into the two ends as usual, projecting lengthwise and inclined upwards. If such a sinker be suspended horizontally by holding the line and snood in the two hands, it will be seen that with regard to the vertical plane of suspension, the sinker will present a surface on the lower side, inclined to the perpendicular of descent, which thus causes the lead to shear away in an inclined plane, the direction of which is determined by the direction of the motion imparted to it on throwing it into the water. Thus, three leads may be cast over the side of the boat, the one straight out from the broadside, a second in a direction inclining a little forward, and a third inclining aft, and this divergence will increase until they arrive at the bottom, where they will be at a very considerable distance from each other. Lines used on opposite sides of the boat must have opposite ends of the sinkers attached to the

main line, otherwise they will shear under the boat instead of away from it. Whether the boat-shaped or shearing lead be employed, the lower appendages of snood, &c., are the same.

Below the lead, a sid strap or length of cord snooding rather slighter than the fishing line, or better still, a length of gimp of about 3 or 4 ft. is attached, and to the lower end of this, a strong brass swivel followed by the gimp snoods peculiar to this form of rig, and which are made in the following manner:—Take 4 feet of strong gimp, No. 3, and whip a loop on each end; at 4 inches from one end bend the gimp into a bight, and whip it to form another loop; this last loop is attached to the swivel at the end of the sid strap, and forms a double-ended snood. (*Page* 13.) Whiting hooks with extra long shanks (*page* 22), whipped to No. 1 and 2 gimp, are attached to the terminal loops, and thus the rig is complete for two fish. The lead is to be lowered to the bottom, and then raised so as to allow the tide to carry the snood away from it and keep it off the ground. If the fish are plenty, and if the tide be running sufficiently strong to carry off a longer length of snood, then any number of the double snoods can be added on by looping the bight of the last to the long end of the preceding one. In this case, of course, the hooks on the long ends are dispensed with except the last, and the short arms alone are provided with them. With this arrangement, five or six whiting may be taken at a haul, and time and labour both economized. It is an improvement to attach each hook to the main snood by the intervention of a brass swivel, but where economy is an object, all the swivels may be dispensed with. The gimp snoods constitute the perfection of this arrangement, as they keep all the hooks clear of each other. The best bait for whiting is fresh pilchards, but mackerel, herring, mussel, gar-fish or long-noses, and salt pilchards are very good substitutes.

COD AND CONGER FISHING.

The arrangements best for cod and conger fishing are the boat-shaped rig just described, with the addition of the element of extra strength. The main line is stouter, the lead is about the same, the shearing lead being preferable, but the sid strap, whether of cord or gimp, is much stronger, the swivels are strong and massive, and the double-ended snood of No. 5 or 6 gimp, or HEARDER'S extra stout gimp with flax core. The hooks are the principal object of attention, and are mounted or ganged in various manners.

HEARDER'S HOOKS WITH WIRE SNOODS.—A short wire snood is made by passing a fine copper wire several times over two hooks about nine inches apart; one of these hooks is then twisted whilst the other is stationary, and a snood of wire is thus formed, having a loop at each end. The fish-hooks are all made with eyes, and one of the loops of the wire is passed through the eye of the hook and then over the point, and is ultimately drawn up over the shank tight against the eye. The loop at the other end of the wire snood serves to attach it to the swivel or double-ended snood, as the case may be. (See *page* 23.)

Another plan is to whip very stout gimp on to the shank of the hook with strong wax-thread, and then serve this over again with fine wire, taking care to fasten the end securely. A loop is formed in the other end by whipping and serving with wire in the same way. These are very defiant of the teeth of the conger. (See *page* 22.)

A third plan is to whip a single or double length of snooding cord on to the shank of the hook, and then to serve this over with wire, carrying the wire serving 5 or 6 inches up over the cord.

Lastly, a number of strands of flax yarn, known in the trade as sail or roping twine, can be plaited together rather loosely, so as to form a snood; the snoods are

either knotted on to eyed hooks, or whipped on to the shanks of hooks with flattened ends, the whipping in this case being served with wire. The platted flax requires no protection, as it is too soft to be bitten through.

Cod will take any kind of fresh fish, but fresh mackerel, herrings, pilchards, and cuttle fish are the best.

THE TROT, SPILLER, BOULTER, OR LONG LINE.

This is a very efficacious and wholesale way of fishing, and is now carried out on both sides of the Channel on a very large scale. Long lines having from 500 to 2000 hooks are laid down, extending sometimes miles in length; but as the present treatise is intended principally for amateurs who would not care to be troubled with more than 100 or 200 hooks, the description which will apply to a line of 100 hooks will apply to the rest. Where longer lengths are required, any number of these can be attached end to end.

The character of a spiller or boulter will be determined by the locality in which it is to be laid, and the class of fish to be caught. These lines may be set in the mouths of estuaries or tidal harbours, where bass, pollack, flat fish, and small conger are to be met with, and here they are generally termed spillers or trots; or they may be laid along an extended portion of seaboard for conger, ling, haddock, cod, hake, turbot, skate, &c., where they are termed boulters. A convenient spiller consists of a line termed a head-line, about 80 yards in length, having 50 hooks secured to it at intervals of rather more than four feet. The snoods of these hooks are either wholly of small cord snooding secured to eyed hooks, or the hooks may be whipped to gimp, twisted gut or wire, and these again attached to short cord snoods, the strength of the whole being regulated by the size of the fish sought for. The boulter with its

hooks, when only 50 in number, may be wound on a square winder, such as is used for a cod line. When the boulter is longer and contains 100 hooks or more, the square winder is inadequate, and Hearder and Son have therefore contrived a box or boulter reel, which consists of a box about 15 to 20 inches high, and 10 to 15 inches square, having two flanges or cheeks round the outside, one at the bottom, and one 4 or 5 inches down from the top. The upper portion of the box above the flange has a dozen or 24 slots cut in its sides, reaching nearly down to the flange, and wide enough to admit a snood. The boulter is coiled round the exterior portion of this box between the cheeks, and the hooks all passed into the interior by slipping the snoods one after another into the slots. The box is provided with a cover which keeps all snug, and a rope handle by which to carry it. If necessary, the hooks may be carried in the interior ready baited.

To lay the boulter, a couple of buoy-lines of sufficient length with sinkers and corks must be provided. To the first of these, close to the sinker, one end of the spiller is fastened. It is then unwound from the reel and lowered into the water, each hook being baited in succession with squid, worm, &c. As it passes out, the boat is gradually moved on so as to extend the spiller in a direction across the current of the tide. When the whole of the line is paid out, the last end is fastened to the other buoy-line in the manner before described, which is also let down with its cork attached. In this condition it may remain as long as it is thought desirable; but in general, as soon as the whole is paid out, it will be time to go to the first buoy-line and haul it up. The spiller is then under-run by taking it in on one side of the boat and paying it out on the other, unhooking the fish, and rebaiting the hooks as the boat passes under it. The end of the spiller being reached, it is again lowered, and the operation of under-running

is recommenced at the other end at a suitable time. It is a valuable addition to a boulter to have each hook furnished with a swivel, and to render it still more perfect HEARDER AND SON have invented a brass revolving head-link, consisting of a strong wire link working loosely in a grove on a brass collar, which is slipped on upon the boulter-head, and fastened to it at the requisite intervals. This brass head-link allows the boulter-head to twist without coiling up the snood. It sometimes also happens that a large fish is hooked so far down the throat as to render it difficult to detach the hook even with a disgorger, especially if the captive should chance to be a savage or unruly conger. To save the time which would be thus wasted and prevent the risk of entangling other portions of the line, HEARDER AND SON have contrived a spring hook-link as a medium of connecting the snood with the boulter-head, by means of which the snood can be detached in a moment from the head-line and another snood and hook substituted in its place, and the troublesome fish can be set aside to be unhooked at leisure.

A floating trot is an arrangement precisely of the same kind, but being required for the surface it is usually made of fine flax or stout horsehair, having gut snoods to the hooks, and a number of corks, lashed to it at suitable distances, to keep it floating. It may be secured to the buoy lines close under the corks, and may be stretched across an estuary. Pollack, bass, mackerel, and grey mullet are the fish usually taken with it. Salmon and salmon-peel have also been known to take the bait of a floating trot. A list of these spillers and boulters will be found at *page* 20.

Emigrants will find great amusement in whiffing as they pursue their voyage; a strong whiting or cod line, with a sinker of two or three pounds in weight, being best suited to the purpose. Beyond the sinker a smaller line may be attached, terminating with one of HEARDER

AND SON'S large silver spinners, an imitation flying-fish, their new kingfisher or lastly their new porpoise bait. If none of these be at hand a large hook baited with a piece of meat will often answer. With these appliances, albacore, bonita, dolphin, &c., are often taken with it in abundance both on the east and west coast of Africa, and in the Red Sea. Farther south, sharks may be taken, with strong lines and suitable hooks, baited with meat.

THE SEA FISHING

IN THE NEIGHBOURHOOD OF

PLYMOUTH.

The following remarks are designed for the benefit of strangers visiting Plymouth, who may be desirous of availing themselves of the opportunity of getting a little good sea fishing:—

Mackerel.—The Mackerel visit Plymouth as early as May and June, at which time they are only caught in the offing and near Penlee Point and Rame Head. Towards the latter end of June they approach nearer, and in July and August can be taken in Cawsand Bay and Plymouth Sound, within the Breakwater, in great abundance by whiffing with the flies, soleskin, and spinner. In August and September they go to the bottom, and are then caught in great numbers with the ordinary chad or pouting tackle, when fishing for pouting.

Pollack.—These are caught at all times of the year, but in the greatest abundance from March to July, though very large pollack are taken in the fall of the year. They frequent all rocky headlands and shores where weeds accumulate; hence at Plymouth their haants are any of the sunken rocks indicated by the conical buoys moored at various places in and about the Sound. The Batten Reef, the sunken rocks in Batten Bay, termed the "Leek-beds," along each face of the Breakwater, on the Bridge or reef of rocks between Drake's Island and Mount Edgcumbe, and near the

shores of Penlee Point, Rame Head, the Rennies, and the Mewstone. (See Map.) The largest pollack are caught at the last three places. They may be taken either by whiffing or with drift lines at anchor.

Bass.—These visit Plymouth in May, June, and July, and increase in numbers until September and October, or even as late as Christmas. The largest are caught by whiffing, or with a fly or spinning sand-eel, or any of Hearder's artificial baits, by a rod from a boat at anchor off Penlee Point and Rame Head, round the western end of the Breakwater, near the bridge from Redding Point to Drake's Island, and abreast of the Citadel. With the rod line in particular, from a boat, they are taken in Barnpool, and in the largest numbers near Laira Bridge, when the tide is flowing up over the Laira sands. The finest sport for bass, however, is obtained at the Rame Head. Here, in a good spanking breeze, and a white-crested wave dashing against the rocks, the fisherman, with his 16 or 18 feet rod of East India cane, and 50 or 60 yards of fine strong line, plants himself, in defiance of the breeze, and throws out his bait, the plano-convex minnow being the best of artificial ones. Having made his cast, he draws in again smartly, and renews his throw amongst the billows. If bass are on the feed he is rewarded by a dozen or so of fish, from 5 to 12 lbs. In order to land these, he has recourse to a gaff, in joints like a fishing rod, 12 or 14 feet long, as he cannot get near enough with an ordinary gaff, without danger. (See *page* 31.)

Pouting are taken in many parts of the Sound, in some of the deep channels abreast of the Citadel; near the Mallard Buoy; off West Hoe Terrace; in Firestone Bay; about a cable's length south of the Cobbler Buoy; just within the east and west ends of the Breakwater; in Millbay; and close to the Coal Hulk in Catwater. The best time is near high and low water, when the current is not too swift. The boat

for this purpose must, of course, be anchored. Pollack lines may also hang over the side of the boat, as these require less attention, and had better be provided with floats.

Chad and Mullet.—These may be taken in July, August, and September; the former near the ends of the Breakwater, and the latter in or near the Great Western Docks, in Millbay. (See *page* 91.) Either pollack or pouting lines may be used for chad; but they should be furnished with three or four hooks on each line, as they bite very greedily at almost anything in the form of bait, and they may be taken three or four at a time. They swim at a depth varying from one to three or four fathoms. Chad take the silver spinner, sole skin, or jim crow readily.

Whiting and Cod.—These are taken in great abundance in the neighbourhood of the Eddystone, and within a radius of three miles all round it. The best spots, however, are about a mile and a-half south-east of the Eddystone, and the same distance north-west of it. Sometimes they shift their positions and are found a little westward or eastward of these spots. Another excellent situation is about a mile south of the Rame Head. Whiting are also occasionally taken in different parts of the Channel, about 6 to 8 miles south of the Breakwater. These are also favourite spots for cod. From 300 to 800 whiting are deemed a decent catch for five or six hours' work.

Conger may be met with in almost any part of the Sound, but principally near the termination of reefs, and in the channel between Lambhay Point and Mount Batten, as well as off the Citadel. They feed at night.

The Drum Net, described at *page* 37, generally ensures a fine catch of large fish, as well as occasionally crabs and lobsters.

LOBSTER, CRAB, AND PRAWN FISHING.

The rocky shores around Plymouth, as well as within the harbour, afford an abundance of Lobsters, Crabs, and Prawns; and as these require no skill to catch them, but merely the employment of suitable contrivances, HEARDER AND SON call attention to their new form of wicker traps, which they invented expressely for the Exploring Expedition, to economize space in stowing on board H.M.S. *Challenger*. They are made dome-shaped, with flat detachable bottoms, which latter being removed enable the traps to pack one inside the other, by which a dozen will not occupy more space than two or three. These wicker traps are moored by stones or other sinkers, and their place is marked by a buoy line. The bait, consisting of fish garbage, is secured to the bottom inside, and the crabs, &c., enter through an opening in the top, after the manner of a wire rat-trap. The prawn-pots are smaller in dimensions, but are constructed precisely upon the same principle and used in the same manner. Both crabs and prawns, the latter sometimes reaching 4 or 5 inches in length, can be taken all along the inner side of the Breakwater, and about the rocks of Drake's Island, and Batten Bay.

HEARDER'S new portable collapsing net crab and lobster trap. It is constructed by stretching over a framework of iron a dome-shaped net, having a conical opening in the top through which the crabs, &c., enter, in the same way as in the wire and wicker traps. The net is removable, and the iron frame folds in together so as to form a flat disc, thus occupying the least possible space. They also make net prawn traps on the same principle.

THE TRAMMEL.

This is one of the most useful and convenient nets the fisherman can possess ; it is so easy to manage and so expeditiously laid down. It is a net so arranged that it stands up like a wall about 6 feet high, the lower edge resting on the bottom of the sea, being kept down by leads on the foot line, whilst corks along the top edge serve to keep him upright.

It consists essentially of a very fine net, with meshes too small for a fish to pass through, and which is fastened to the upper and lower ropes. On each side of this net there is placed another net with very large meshes, say 12 to 18 inches square, which is also fastened to the head and foot rope. These two outer nets are made of strong cord, and when tight determine the height of the net from the ground, viz., 6 feet.

The inner, or fine net, is about double the length and width of the outer ones, but is gathered into the same length, so as to leave a large quantity of slack net in the middle. A fish attempting to pass through the net from either side pushes the small net before him through the large meshes on the opposite side, and soon gets himself into a purse, from which he cannot extricate himself. The length of the net may vary from 10 to 50 fathoms, or two nets may be joined together if greater length be desired.

To set the Trammel choose a sheltered spot where fish frequent ; or if you set in a tideway, arrange your net up and down with the tide, and not across it, otherwise the current may force the net to lie on the ground. Provide yourself with two buoy lines of a length suitable to the depth in which you are going to fish, attach a sinker to each of about 25 lbs., and put on a few corks just to keep the line upright in the water. Having arranged your net in the boat ready to pay out, attach one end of the foot or leaded line to the sinker of the first buoy line, and the head or cork line about 6 feet

up ; then proceed to lower carefully to the botton, which being reached, pay out the net, keeping it well open, with the head line highest.

An assistant paddles the boat gently away as you pay out. When you have reached the end attach the other buoy line, and lower as before, keeping the net tolerably well strained, but not too much so.

A second, and better plan, is the following :—Provide two iron grapnels, to each of which attach 3 or 4 fathoms of 1½ or 2 inch rope. Next take 4 fathoms of rope rather smaller, form a bight in the middle, which connect with the end of the rope belonging to the first grapnel, thus leaving two ends of two fathoms long each. Attach one of each of these ends to the head and foot rope of your trammel, and then insert a 6-feet spreader of ash, forked at each end and loaded a little at the bottom. The other grapnel with its rope is furnished in the same way.

To set the net, you lower the first grapnel, and, as soon as it is in the ground, draw the rope tight and lower your net, keeping it tolerably tight as you lay it down. When you reach the other end of the net, attach to it the bridles of the other grapnel, insert a similar spreader, and haul upon the bight and grapnel rope until you have strained the net tight.

Then, in order to lower the second grapnel, attach a buoy line to one of its hooks, which will not only serve to keep the grapnel strained whilst being lowered, but will also act as a tripping line to raise it. By this process the net stands up much more firmly than by any other.

To raise the net, lift the grapnel by means of the buoy line, and as soon as you have got the first end of the net into the boat, take out the spreader and close up the net by bringing the head and foot ropes together.

All sorts of fish are caught in this net, amongst which are some of the choicest kinds. It should be set just before sunset, and may be raised two or three hours

afterwards, and then put down again and allowed to remain all night.

THE OTTER TRAWL,

AND HOW TO USE IT.

As the value of this portable, convenient, and effective form of net cannot be over estimated, and as HEARDER AND SON are not acquainted with any work which affords such particulars respecting the net as would guide the fisherman in the choice of the one best suited to his craft, or instruct him in the mode of using it, they have been induced to offer a few general remarks, which they trust may supply the deficiency. All who use the Otter Trawl agree in awarding to it a vast superiority over the Beam Trawl, for the following reasons :—

First, it takes more fish than the Beam Trawl, often in the proportion of two or three to one. On one occasion a gentleman writes, "I had an excellent opportunity of trying the 42-feet Otter Trawl I had of you last September, against a Beam Trawl in the hands of a professional fisherman. We had both 15-ton cutters; we trawled over equal ground, keeping about 300 yards apart; we let down and hauled up at the same time. On running alongside the beamer he turned out a fine catch, but we had at least three to one. My men, who have hitherto been prejudiced in favour of the Beam Trawl, are now quite converted to the Otter." On another occasion he was fishing on the coast of France, where he met with three Beam Trawlers who had arrived with their catches at the same spot, near about the same time. On emptying their nets they were perfectly surprised at the excessive quantity taken by his Otter Trawl. When turned out on the deck he says "we were literally knee deep in fish."

Secondly, it occupies less room. A 42-feet Otter Trawl packs with its otter boards in the space of 2 feet 6 inches in length, and about 21 inches in width and depth, whilst the cumbrous beam and iron heads are dispensed with.

Thirdly, it requires a smaller boat to tow it. A 45-feet Beam Trawl cannot be well worked by a vessel under 40 tons, whilst a 42-feet Otter Trawl is often worked with a 22 or 24-feet boat, scarcely registering 7 tons. A gentleman writing from the north of Scotland, where the coast is rocky, dangerous, and subject to sudden and frequent gales, says, "I was only able to try the trawl yesterday, owing to the windy weather, and even yesterday we had to give it up after a very short trial, owing to a furious gale which suddenly sprang up, so that we had difficulty in getting home. I had no difficulty, however, after studying your instructions. My boat, which is 25 feet long and Newcastle rig, towed your 42-feet easily without a hitch; we hauled only once, but caught 2 cwt. of fish, principally soles, plaice, &c., some of them very large. I never saw a net before, nor never tried my hand at sea fishing." A boat 10 to 15 tons works it with ease, whilst it is so accommodating in its character that a 50 or 60-ton boat may also be employed for the purpose. A boat that will only tow a 10 or 12-feet Beam Trawl will take a 30-feet Otter Trawl with ease.

Fourthly, it can be made of double the dimensions of the largest Beam Trawls, viz., 90-feet mouth, and worked with quite as much ease, and is, therefore, admirably available for yachts of 80 tons and upwards.

Fifthly, it accommodates its resistance to the power or speed of the vessel towing. For instance, if the net be large in proportion to the speed of the towing craft, the ground rope bags a little and the otter boards come closer together, thereby lessening the opposed area, and consequently the resistance of the mouth, whilst the

corks rise and keep the mouth well open. When the speed is greater the otter boards fly well open and keep all taut.

Sixthly, if in the case of employing too much power or too high a speed, or fishing in too great a depth of water, there should be a tendency in the net to rise from the ground HEARDER AND SON have contrived two modes of meeting the difficulty —

First, they give additional weight to the otter boards by providing lead plates, which can be screwed on to the lower parts of their sides; and secondly they recommend the introduction of two or three fathoms of galvanized iron chain between the otter boards and the end of the bridle, which, by keeping nearer to the ground, will lessen the angle at which the bridle pulls upon the trawl, and consequently to the same extent prevents the tendency to leave the ground.

Seventh, it is much easier to empty its contents, since the otter boards close in together as they come to the surface, and the net comes on board like a bag, without being encumbered with the clumsy beam and irons.

MANAGEMENT OF THE TRAWL.

This is extremely simple. As soon as the net is in the water and the boards let down, keeping them a little apart, they take their vertical position, and the resistance of the water, occasioned by the way of the boat, makes them recede from each other as the bridle is let out, and it is interesting to observe them flying off and spreading the net as they go down.

Rather a long bridle should be used, say as many fathoms as there are feet spread of mouth; this on the bight will be enough for both spans. Each span should have the twist taken out before shackling on the otters, and the introduction of an ash spreader about 4 or 5 feet long, and a fathom or so from the bight or point of connection with a tow rope, will prevent the spans of the bridles from twisting up together, which new rope is

very apt to do. Should the bridles be too long, they can be stopped together in any part of their length, and the spreader introduced below the stopping. Some have substituted galvanised iron chain for the foot rope, but have soon resumed the use of the latter, than which, if properly weighted, their is nothing better.

It is well to let out the tow rope from the bow, and bring it aft outside, stopping it fast on the quarter in such a way, that should the trawl bring up in a rock or other obstacle the stopping may part, and thereby bring the boat's head round to the wind, which would prevent damage to the net.

Otter Trawls are usually made with meshes much too small, a practice which no one appears to be able to defend, but which is open to many grave objections. The small mesh nets not only get quickly clogged with weed, which makes them drag the bottom and offer undue resistance, which prevents the otters from spreading properly, but they cause frightful destruction to small fry. No fisherman ought to wish to retain a fish that would pass through a 2½-inch mesh ; and in adopting this size these objections are greatly removed, whilst the efficiency of the net is in no way impaired. Attention must be also paid to the speed at which the net is towed. If too slow the otters have a tendency to approach each other, if too fast the otters and net may rise off the ground. In this case the otters must be weighted or the speed decreased. Ten to fifteen fathoms is a suitable depth under ordinary circumstances, but beyond this extra weight to the otters is generally required.

The following remarks, gained from practical experience, may be useful in guiding the fisherman as to the choice of his net.

A 16 to 20-feet sailing boat will tow an Otter Trawl 15 to 25 feet.

A 20-feet cutter, say about 4 tons, will tow an Otter Trawl 25 to 42-feet mouth.

A cutter 22 to 24 feet, say 5 to 6 tons, will tow an Otter Trawl 36 to 42 feet. Cutters from 10 to 20 tons will tow Otter Trawls from 42 to 60-feet mouth, and 90-feet Otter Trawls are admirably suited for vessels of 80 to 150 tons.

FISHING AT GIBRALTAR AND IN THE MEDITERRANEAN.

The following remarks may be useful to fishermen visiting the above places. At Gibraltar, Bass are met with in great numbers, and afford excellent sport, either from a boat, or from the rocks with a rod and line. At Europa Point in particular, there is splendid fishing over the sunken rocks. Bass from 3 to 8 lbs. are readily taken with a spinning rod, 60 or 80 yards of line, and the plano-convex minnow (*page* 43), or silver spinner (*page* 28). These even surpass, in many cases, the live bait. In using the live bait, however, a peculiar practice prevails, namely, that of blinding it, either by pricking the eyes or passing the hook through both to prevent his seeing his pursuer. The reason appears to be this—when the bait sees the bass coming, he makes a dart to the surface, and the bass following him sees the line and goes off, hence the necessity for blinding. The bait generally used is the ox-eyed cackerel, in Spanish, "boga," hence the common term bogie.

Rangers, Wrasse, and Rock fish are also taken by whiffing and ground lines.

Mackerel also pay their annual visits to this locality, and are taken with the usual tackles.

The Mediterranean affords a great variety of fishing, both for lines and nets, and HEARDER AND SON are indebted to the kindness of W. C. P. Medlycott, Esq., F. L. S., an eminent naturalist, residing for many years

at Malta, for a copious list of the Mediterranean fish accessible to the fisherman, from which they select a few of those most commonly met with.

The Eel and Conger are taken with the ordinary lines and baits.

Hake, Whiting, Burbot, and some flat fish inhabit the Mediterranean ; but they are not very common, at least in the vicinity of Malta.

The Gurnards, six species, taken in nets and in deep water with bait and in fish pots.

Sea Scorpions, allied to the Gurnards, make excellent soup, and are voracious swallowers of live or glittering artificial bait.

Bream. Of these fish and their allies there are numerous species. Malta enumerates 20 or more ; some are of large size, and nearly all take bait, and are caught with a rod from the rocks with a bit of seaweed (Ulva). They require good and fine tackle.

Grey Mullet, 5 or 6 species, all taken in nets, and esteemed market fish.

Red Mullet two species, abundant, but seldom taken except in nets.

Mackerel, several species, take the usual mackerel baits, and are caught in abundance in seines.

Herring and Sardines are taken in seines.

Sea Pike also take spinning baits readily, and are also taken in nets.

Varieties of Shark and Dog-fish, the Angel-fish, Saw-fish, Skates, Rays, and Sun-fish, are also met with.

Trawling is difficult in most parts of the Mediterranean, on account of the rocky bottom ; but there are a few sand banks here and there which afford an opportunity for following it. The seines may be used with great advantage in many bays, and also a small seine which is hauled into a boat moored on the shore in sandy patches.

The Trammel does not appear to be much used, but would be extremely efficient, as it can be shot in almost

any part of the almost tideless sea when not too rough. Lines of all kinds, for surface and deep-water fishing, with good fine snooding, will at times, and in the proper places, afford fine sport.

Fish and Crab-pots, or Drum-nets, may be relied on for ensuring a good catch frequently, and many rare species may be obtained in this way, both of fish and crustaceans.

The following would constitute an efficient outfit for Gibraltar or Mediterranean fishing :—

	£	*s.*	*d.*
A general rod of hickory or East India cane, with 4 tops	1	14	0
4½-inch bronze reel, with revolving plate handle	1	4	0
80 yards platted flax line	0	6	8
1 dozen 2-yard twisted gut collars	0	12	0
1 dozen brass swivels	0	2	0
1 doz. each, 1, 3*s.*; 2, 4*s.*; 3, 6*s.*; silver spinners	0	13	0
½ dozen No. 3 plano-convex minnows, 18*s.*	0	9	0
2 dozen 2·0 treble hooks, extra strong, to twisted gut, at 5*s.*	0	10	0
3 dozen single hooks, to gut, at 1*s.*	0	3	0
3 dozen ditto, to twisted gut, 2*s.*	0	6	0
6 dozen assorted flies	0	15	0
3 dozen assorted india rubber sand eels	0	15	0
6 boat whiffing lines, for mackerel and bass at 5*s.*	1	10	0
2 yacht ditto, at 7*s.* 6*d.*	0	15	0
2 horse-hair drift lines, with pipe leads, at 10*s.*	1	0	0
2 whiting lines, at 9*s.*	0	18	0
3 dozen spare whiting hooks, to gimp, at 2*s.*	0	6	0
½ dozen spare whiting snoods, 7*s.*	0	3	6
1 dozen swivels	0	4	0
2 conger lines, at 14*s.*	1	8	0
2 doz. spare conger hooks on wire snoods, at 3*s.*	0	6	0
½ dozen spare conger snoods	0	6	0
½ dozen swivels	0	4	0

	£	s.	d.
2 boneta lines for ocean fishing, at 10s. 6d. .	1	1	0
Japanned tin tackle case	0	13	0
Disgorger, 1s. ; gaff, 3s. 6d.	0	4	6
Sea fishing basket	0	5	0
½ dozen fishing leads, assorted, 3 to 6 lbs. each	0	13	0
2 portable drum nets, at 30s. . . .	3	0	0
4 lobster pots, at 9s.	1	16	0
Packages, &c.	0	9	4
	£22	12	0

The number of any articles in the above list can of course be varied as circumstances may require, and with the addition of a few chad and pouting lines, and prawn and shrimp traps and nets, would constitute a good selection for almost any part of the coast of the United Kingdom.

LIST OF TACKLE CONSTITUTING A GOOD FIT-OUT FOR A YACHT FOR BRITISH COAST FISHING.

The whole of the lines in the following list are perfectly free from kinking, and may consequently be used at once, without passing through the usual ordeal of towing astern for several hours to get rid of this disagreeable quality, as is the case with cotton lines.

	£	s.	d.
2 best cod lines, No. 152, at 16s. . . .	1	12	0
2 whiting lines, No. 138, at 9s. . . .	0	18	0
2 ditto, No. 145, at 8s. 6d.	0	17	0
2 pouting lines, No. 132, at 5s. . . .	0	10	0
2 horsehair drift lines, No. 113, at 11s. 6d. .	1	3	0

	£	s.	d.
2 yacht mackerel railing lines, No. 103, at 8s.	0	16	0
2 ditto, No. 104, at 8s. 6d.	0	17	0
4 boat ditto, No. 100, at 5s.	1	0	0
4 chad lines, No. 117, suitable also for mackerel fishing at bottom, at 3s. 6d.	0	14	0
2 gunwale winches for winding in whiting lines, No. 352, at 15s.	1	10	0
Gaff	0	3	6
2 disgorgers	0	2	0
Assorted leads	1	0	0
1 doz. spare hooks to twisted wire, for cod lines	0	3	0
3 dozen whiting hooks, to gimp, at 2s.	0	6	0
2 dozen twisted gut pouting hooks, at 2s.	0	4	0
2 dozen for drift lines, at 3s.	0	6	0
4 dozen assorted mackerel flies, to twisted gut, at 2s.	0	8	0
2 dozen assorted india rubber sand eels	0	9	0
1 dozen 2-yard twisted gut collars	0	12	0
1 dozen each, 1, 3s.; 2, 4s.; spinners	0	7	0
4 spare gimp snoods for conger lines, at 1s.	0	4	0
4 swivels for ditto	0	4	0
6 spare gimp snoods for whiting lines	0	3	6
½ dozen spare swivels, each 4s., 6s. per doz.	0	5	0
6 spare gimp collars for whiffing lines, at 8d.	0	4	0
1 dozen swivels	0	2	0
Assorted loose hooks	0	5	0
East Indian cane rod, No. 297	2	0	0
Bronze reel with plate revolving handle	1	4	0
60 yards platted flax line	0	6	0
4 No. 73, mounted collars, at 3s. 6d.	0	14	0
4 No. 3, plano-convex minnows, at 1s. 6d.	0	6	0
1 dozen green bass flies	0	3	0
Tackle case for appendages	0	13	0
Sea basket with cover	0	6	0
Package	0	6	0
	£21	11	0

In addition to the tackle contained in the present list, the yachtsman should provide himself with a boulter, a floating trot, some crab and lobster pots, prawn pots, shrimp and baiting prawn nets, portable drum nets, trammel, and otter trawl, prices of which will be found under the different heads.

MONTHLY LIST

OF

SEASONABLE FISH.

COMPARATIVELY few persons are aware at the precise time when fish are in or out of season, and the housekeeper often finds this a subject of perplexity. HEARDER AND SON have, therefore, thought that a monthly list of the fish which are "in season" might not only indicate to the fisherman the objects of pursuit at different periods of the year, but impart valuable information for domestic purposes.

JANUARY.

In this month whiting are in their prime, and are plentiful about our coasts. Our markets, however, are supplied more from the trawlers than from the hookers. Hand lining, if the amateur can brave the cold, now rendered more tolerable by HEARDER'S new gunwale-winch, affords fine sport, as the fish bite freely, and occasionally run to the length of 18 or 20 inches. In spring, whiting are decidedly poor, being in a weak state after spawning. Lings are also caught in this and next month, but they spawn in the spring.

LIST FOR THE MONTH.

Atherine (smelt)—tub, piper, red gurnard—mackerel, dory—skate, sharp-nosed ray, homelyn ray—sprat, anchovy—eel—ling, cod, whiting haddock, pouting, coal-fish—pike.

FEBRUARY.

Dabs are in best condition in February, March, and April. They spawn in May or June. Mackerel now begin to make their appearance, and are in very fine condition. Formerly it was not the practice to seek for mackerel much before March and April on the south-west coast, but of late years the mackerel seiners have commenced their operations much earlier, and have been well rewarded for their pains. According to the New Salmon Fisheries Act, the fishing for salmon and trout now commences.

LIST FOR THE MONTH.

Atherine (smelt)—sprat, anchovy—ling, whiting pouting—dab—mackerel—eel—tub, piper, red gurnard—trout, salmon.

MARCH.

Mackerel are still becoming more plentiful, and are never better in season than in this month. The mackerel harvest now begins, and tons are weekly sent from the coast of Cornwall to various parts of England. They continue in season until the end of October, and are caught in large numbers by whiffing. In July and August they enter the harbours and hover about the coast until September and October, migrating from place to place. Congers, which spawn in winter, are now getting in season.

LIST FOR THE MONTH.

Mackerel — pouting — conger — atherine (smelt) — thornback—anchovy, sprat—dab, turbot, brill—trout, salmon.

APRIL.

The scad (or horse-mackerel) now makes its first appearance, and is met with until the end of September. The turbot and the brill are now with roe and milt, and are accounted best as food at this season, though very good at most others.

LIST FOR THE MONTH.

Trout, peal, salmon—scad, mackerel—conger eel—atherine (smelt) — thornback—pouting, hake—brill, turbot, dab.

MAY.

The atherine (smelt) is in roe, and is considered to be best as food now and in June. Wrasses or rock fish of all kinds are in season now and through the summer. Trout and salmon fishing now engross the angler's attention. Peel begin to run up the rivers. The salmon fishing in the North of England still continues with great energy, and a few salmon enter the rivers on the south coast, which as a rule, however, contain nothing but fish returning to the sea after spawning, and in a weak, unwholesome state.

LIST FOR THE MONTH.

Sturgeon—salmon, peel, trout, dory, scad, mackerel—thornback—conger eel—bass, surmullet—launce—pollack, hake—atherine (smelt)—wrasses—turbot, brill.

JUNE.

As the warm weather commences, so general fishing operations keep pace with it. Yachtsmen are on the move, and their trammels, otter trawls, deep-sea lines, mackerel railing, and other appliances are now in requisition. Pollack and mackerel whiffing now commences, and continues throughout the season. Bass enter harbours and estuaries, and afford splendid fishing

with rod and line from boats or headlands throughout the rest of the season. Some of them reach the weight of 20 lbs. Flukes (young flounders) now enter estuaries and afford employment for the fluking-fork. Soles, and nearly all the tribe of flat fish, are now in fine condition, and remain so for several months. Sea bream are good food throughout the summer.

LIST FOR THE MONTH.

Breams in general—wrasses in general— atherine (smelt)—sturgeon—bass, surmullet—salmon, peel, trout —pilchard—thornback—pollack, hake—mackerel, dory, scad—eel, conger—launce—sole, plaice, turbot, brill, mary-sole, flounders, halibut.

JULY.

Hake now are plentiful, and they increase as the pilchards arrive, though indiscriminate trawling is fast diminishing their number, as well as that of other sea fish. Skate is now getting in season, but all the rays are best as food at the close of autumn. The pilchard fishery often begins thus early in Cornwall.

LIST FOR THE MONTH.

Pilchard, herring—homelyn ray, sharp-nosed ray, skate, thornback—launce—sturgeon—mullet, atherine (smelt)—wrasses in general—breams in general—surmullet, bass—pollack, lythe, hake—mackerel, scad, dory —salmon, trout, peel—eel, conger—dab, brill, turbot, sole, mary-sole, halibut, plaice, flounder.

AUGUST.

The two kinds of mullet are now in great abundance, making their way up estuaries towards the fresh water, and affording capital sport for the stop net. This net is laid down across the tide at high water, and allowed

to remain until the tide falls again. As the water area contracts and retreats over the mud, to the limits of the low water channel, the mullet gradually drop back towards the net, and there collect in thousands. From their active habits, they are then seen leaping in great numbers, some of the fish often two feet long, over the head of the net; nevertheless, an immense number are eventually secured, affording a pleasing spectacle from the brilliancy of their scales and the agility of their movements. The mullet continue in season throughout the rest of the year, though they lose some of their flavour towards December. The herring is often on our coast in July, but the fishery seldom prospers till now; it continues to be an object of great importance to the end of November, and sometimes till December, especially on the eastern coast. Deep sea whiting fishing is now pursued with great energy, the catches are abundant and the fish very fine.

LIST FOR THE MONTH.

Bass, surmullet—conger, eel—herring, anchovy, pilchard—pollack, hake—tub, piper, red gurnard—wrasses in general—breams in general—sharp-nosed ray, thornback, skate, homelyn ray—atherine (smelt), mullet—salmon, peel, trout—sole, flounder, plaice, dab, mary-sole, halibut, turbot, brill—dory, scad—launce.

SEPTEMBER.

Chad (or young bream) are now taken in great abundance by the fisherman, who, with his paternoster line and bit of mudworm, takes them 3 or 4 at a time as fast as he can pull them in. This month closes salmon fishing, though rods are allowed a month longer.

LIST FOR THE MONTH.

Sole, flounder, plaice, dab, mary-sole, halibut, turbot, brill—conger, eel—trout—launce—pollack, coal-fish,

lythe, hake, whiting—chad and bream in general—wrasses in general—bass, surmullet—mullet, atherine—scad, dory—tub, piper, red gurnard—sharp-nosed ray, skate, homelyn ray - sprat, herring, pilchard, twaite, shad, anchovy.

OCTOBER.

Mackerel often reappear in this month; but having spawned they are very poor. The skate family are all now in good condition, and remain so throughout the year. At the end of the month cod are first in season, having been lean and poor throughout the early part of the year. The "tamlin cod," or "tom cod," is the young of the cod, and when about a foot long is a very dainty dish, and good to the end of the year. The haddock and coal-fish also are now in perfection, and remain so till the end of the year. This month closes salmon fishing with rod throughout the United Kingdom, and trout are getting out of season, this being their spawning time.

LIST FOR THE MONTH.

Plaice, sole, flounder, dab, halibut, turbot, brill, mary-sole—mackerel, dory—surmullet—conger—salmon—wrasses generally—tub, piper, red gurnard—whiting, pollack, cod, haddock, coal-fish, hake, homelyn ray, skate, sharp-nosed ray—launce—pilchard, sprat, herring, twaite, shad, anchovy—mullet, atherine (smelt).

NOVEMBER.

The pouting is in best condition now and in December; but is taken on through the winter months, and in spring when with roe. Pilchards occasionally make their visit to the shores very late in the year, and thus October and November become at times the season of the seine fishery. The young of pollack, 6 or 8 inches

long, are now taken in shoals. Herrings at times visit the coast in great shoals, even late in the month, contrary to their customary habit of retiring at this time to deep water to spawn.

LIST FOR THE MONTH.

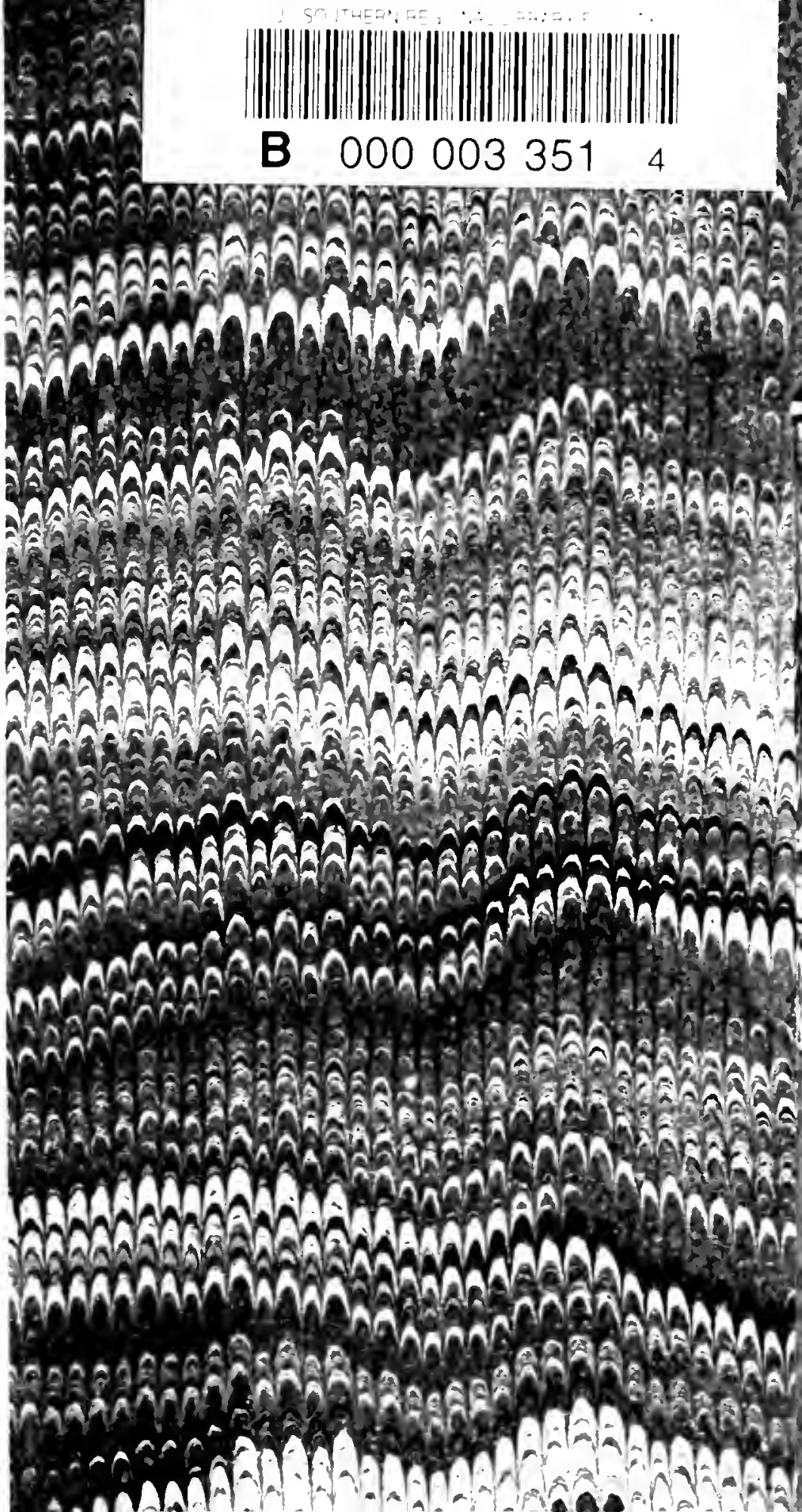
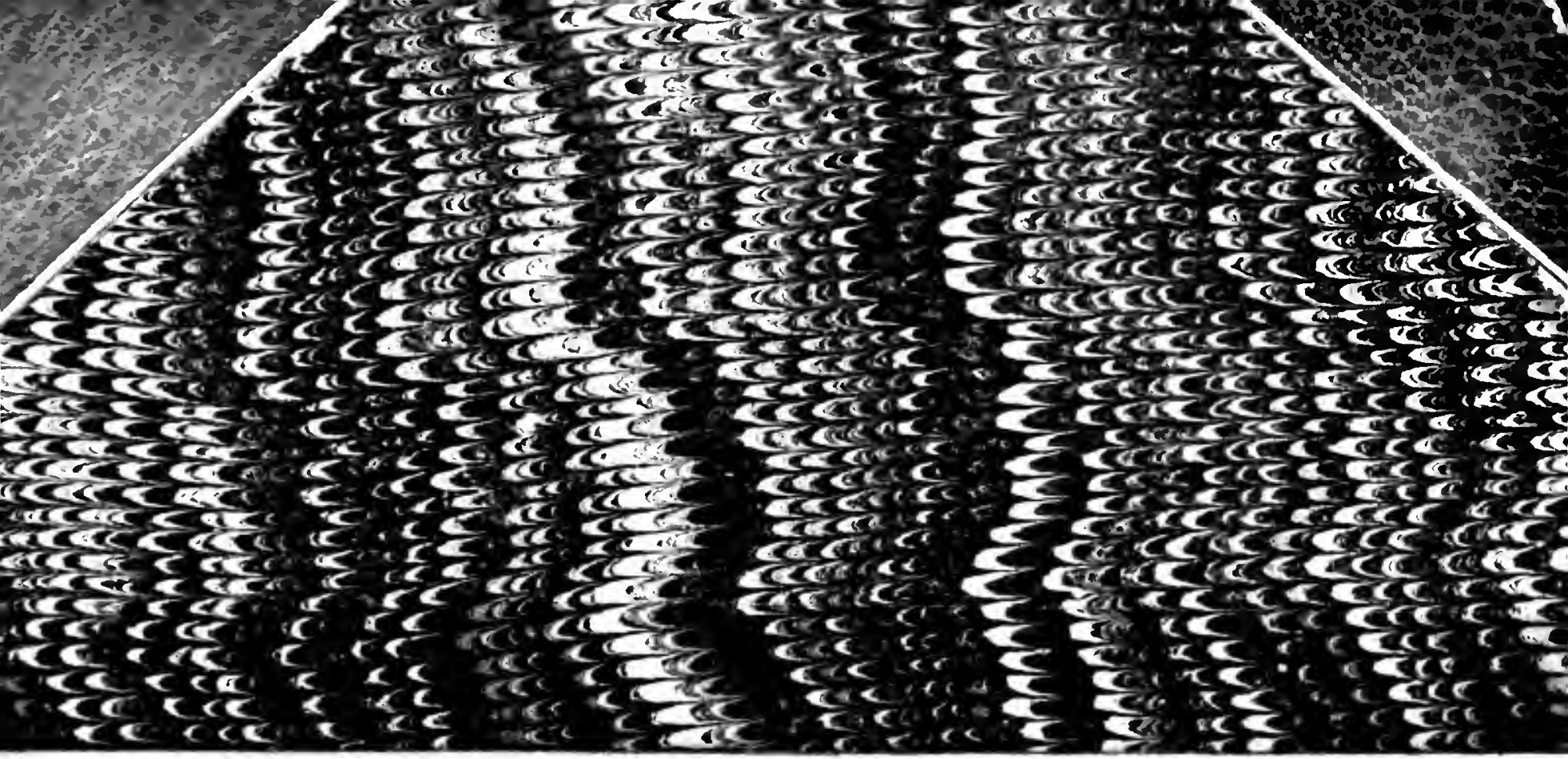
Anchovy, twaite, shad, herring, sprat, pilchard—the wrasses generally—tub, piper, red gurnard—sole, flounder, dab, plaice, mary-sole, halibut, turbot, brill—dory—surmullet—coal-fish, hake, whiting, cod, haddock, pouting, ling—atherine (smelt), skate, homelyn ray, sharp-nosed ray.

DECEMBER.

Mackerel often make their appearance in shoals during this month, being the earliest commencement of the general fishery. Hakes are now in great abundance, prior to retiring to deep water to spawn; the females are found heavy with roe.

LIST FOR THE MONTH.

Coal-fish, hake, ling, cod, haddock, pouting, whiting—tub, piper, red gurnard—eel—sprat, pilchard, anchovy—dory, mackerel—atherine (smelt), skate, homelyn ray, sharp-nosed ray.

J. SOUTHERN B[illegible]

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